

**AN APPRAISAL OF PRIMARY HEALTH CARE STAFFING SITUATION
IN THE FEDERAL CAPITAL TERRITORY, ABUJA, NIGERIA**

BY

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DEDICATION

This Dissertation has been dedicated to God Almighty, all primary health care personnel in all the Primary Health Care facilities in the Area Councils of the Federal Capital Territory, Abuja, Nigeria.

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ABSTRACT

Health personnel are central to the effective implementation of Primary Health Care (PHC). The Federal Capital Territory (FCT), Nigeria by virtue of its political status is expected to be a model regarding the effective implementation of PHC. One of the indicators of quality PHC implementation is adequate health manpower. This information with regard to the FCT is needed to ascertain the fulfillment of this expectation as a model. Hence, this study was conducted to assess Health Manpower availability in PHC facilities.

A cross-sectional study was carried out among all the 809 health personnel in 180 PHC facilities in FCT. Population figure was obtained from national census, 2006. Data were collected with a pre-tested, structured, self-administered questionnaire which focused on respondents' socio-demographic characteristics and their perception of personnel availability. In-Depth Interviews (IDI) were conducted with all heads of the six PHC departments. Four randomly selected PHC centres were visited for five consecutive days to record absentees using a register review checklist. Staff Population Ratio (SPR) was compared with the minimum standard set by the National Primary Health Care Development Agency (NPHCDA). Data analysis was done using descriptive statistics, Chi-square and thematic approach.

Respondents' mean age and years of work experience were 33 ± 7.4 and 8.1 ± 6.7 years respectively while 98.6% had post secondary education. The respondents included senior Community Health Extension Workers (CHEWs) (40%), junior CHEWs (23.3%), Nurse/Midwives (18.8%), Community Health Officers (CHOs) (5.0%), Laboratory Technicians (2.5%), Medical Record Officers (MROs) (1.7%) and, Medical Officers (1.4%). Others (7.1%) included Pharmacy Technicians, Environmental Health Officers, and Laboratory Scientists. The SPR per 100,000 population for various cadres were 1.0

Medical Officers), 3.2 (CHOs), 32.0 (senior CHEWs), 18.0 (junior CHEWs), 5.8 (Nurse/Midwives), 0.9 (MROs), 1.0 (Pharmacy Technicians) and 2.2 (Laboratory Technicians) compared with the NPHCDA minimum SPR of 2.3, 2.3, 24.6, 50.2, 9.1, 2.3, 2.2, and 2.0 respectively.

Majority (69.5%) of the respondents perceived that health personnel were adequate in their health facilities. The IDIs revealed that services rendered met most of the patients' requirements and lapses occasionally observed were due to lack of functioning equipments and frequent drug stock-outs. The respondents stated that opportunity for continuing education (60.3%), availability of working materials (53.3%), and matching skill to task (51.5%), substantially encouraged staff retention. Major reasons given by respondents for inadequate health personnel were lack of recruitment by the government (75.3%), non-provision of equipment (16.9%) and basic infrastructure (9.0%). Both IDI and observation revealed staff absenteeism was mostly due to ill health and lack of accommodation for staff. Absenteeism rate in the observed facilities was 10.7%. All PHC services except oral and mental health care were provided in observed health facilities.

Availability of primary health care personnel in the Federal Capital Territory fell short of the minimum standard for most primary health care cadres. There is a need to plan for adequate primary health care personnel in the Federal Capital Territory to achieve comprehensive health care delivery.

Key words: Health manpower availability, Primary Health Care, Staff absenteeism, Staff population ratio

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CERTIFICATION

I certify that this study was carried out by Christianah Moronwitan IBRAHIM in the Department of Health Policy and Management, University of Ibadan

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Abbreviations

AC	Area Council
AMAC	Abuja Municipal Area Council
ARI	Acute Respiratory Infection
Avail	Available
BAC	Bwari Area Council
CHC	Comprehensive Health Centre
CHEWs	Community Health Extension Workers
CHO	Community Health Officer
CHO/SN/Mw	Community Health Officer/Staff Nurse/Midwife
EHO	Environmental Health Officer
EHT	Environmental Health Technician
Expd.	Expected
FCT	Federal Capital Territory
FMOH	Federal Ministry of Health
GDP	Gross Domestic Product
G/LADA	Gwagwalada
HC	Health Clinic
HERFON	Health Review Foundation of Nigeria
HF	Health Facility
H/Post	Health Post
HIV/AIDS	Human Immunodeficiency Virus /Acquired Immune Deficiency Syndrome
HRH	Human Resource for Health
JLI	Joint Learning Initiative
JCHEWs	Junior Community Health Extension Workers
Lab	Laboratory
LGA	Local Government Area
Ltec	Laboratory Technician
MDGs	Millennium Development Goals

MRO	Medical Record Officer
Mw	Midwife
NPHCDA	National Primary Health Care Development Agency
NYSC	National Youth Service Corps
OECD	Organization for Economic Cooperation and Development
PHC	Primary Health Care
PHCC	Primary Health Care Centre
PHN	Primary Health Nurse
Popn	Population
Ptec	Pharmacy Technician
SN	Staff Nurse
SN/Mw	Staff Nurse/Midwife
SPR	Staff Population Ratio
TBAs	Trained Birth Attendants
UCI	Universal Child Immunization
VHWs	Village Health Workers
Yrs	Years
WAMS	West Africa Medical Service
WHS	Ward Health System
WHO	World Health Organization
WHR	World Health Report

CHAPTER ONE

INTRODUCTION

1.1 Health Development in Nigeria

Before the advent of orthodox medicine, there was some form of traditional medical practice by the Nigerian indigenes known as Dibias, Babalawos, Adahunses, Wombai and Gozams etc. depending on the locality of such traditional practitioners, rendering various forms of traditional healing (HERFON, 2007). This practice is still thriving and receiving patronage from a high proportion of Nigerians till date.

The introduction of modern medical care in Nigeria dated back to the efforts of the British explorers, Colonial Administrators and Missionaries. The modern health care has its root in West Africa Medical Services (WAMS) established towards the end of 19th century to cater initially for the colonial administrators and gradually extended its activities to neighboring natives (Oyegbite, 2004).

However, the first attempt at health reforms was from 1946 – 1956 when the then colonial government produced a 10-year program for development and welfare. “This plan had a limited framework for a unitary health service” (Asuzu, 2008). The plan had no input whatsoever from the Nigerians. It took into consideration health facilities and drug supply but no consideration for indigenous health manpower development. The health program also had no form of health services integration rather it was vertical for the treatment of such conditions like leprosy, yaws, sleeping sickness, and maternal care. There was therefore, poor utilization of the available health service by the people (Oyegbite, 2004).

From 1962 - 1968, the first National Development Plan in the post-independent era did not articulate a system with clear responsibilities for each level of government (Asuzu, 2008).

The maintenance of the status quo prevailed due to lack of resources (skilled manpower) and lack of understanding of the central role of health services in the overall development of the nation especially by the top decision makers (Oyegbite, 2004). In 1970 - 1974, the health component of the Second National Development Plan identified and aimed at correcting some of the deficiencies in the health services (Ogbalu *et al.*, 2004). In 1975 – 1980, the ambitious Third National Development Plan had the Basic Health Services Scheme as its focus, but again failed to share responsibilities between the three levels of governments for resource generation, manpower development, health professional deployment and service delivery. In 1980s, following the Declaration of Alma-Ata, there were serious attempts at health system reform, based on the principles of Primary Health Care (PHC) resulting in the National Health Policy in 1988 (Asuzu, 2008).

Nigeria made appreciable progress in the Local Government Area (LGA) - focused PHC initiative of 1986 - 1992, which resulted in the attainment of Universal Child Immunization (UCI) target of 80%. Following this feat, the National Primary Health Care Development Agency (NPHCDA) was created in 1992 to ensure sustainability of PHC. (NPHCDA, 2006). Unfortunately, Nigeria witnessed loss of the earlier gains between 1993-1999 due to instability in governance, poor funding, lack of political support, low capacity of the local government to manage PHC and withdrawal of donor support among other factors (NPHCDA, 2006).

The World Health Organization ranked Nigeria's overall health system performance 187th out of 191 Member States in 2000 (World Health Report, 2000). It was in the same year 2000 that the Federal government repositioned the NPHCDA and mandated it to revitalize the nation's PHC system. To achieve this purpose the Ward Health System (WHS) was introduced in 2001 by the agency. This system involves adopting the political wards as the operational units for the implementation of the PHC programs. The idea behind this is to provide a nationally acceptable targeted area of operation with clearly defined boundaries and political representation of the population. The goal is to improve and ensure sustainable health services with full and active community participation (NPHCDA, 2006).

The objectives of Ward Health System are to:

1. Promote full and active participation at the grass-root level in order to sustain an effective and efficient PHC services delivery in the ward.
2. Improve access to quality health care and ensure equity
3. Promote local initiatives and encourage poverty alleviation activities in the ward.
4. Reinforce Political commitment to PHC at the grass-root level
5. Reduce morbidity and mortality especially among women of child bearing age and children under five years.

The national health policy regards primary health care as the framework to achieve improved health for its population. PHC is the first level of contact of individuals, the family and community with the national health system, bringing health care as close as possible to where people live and work at a cost the community can afford i.e. PHC is the first element of a continuing health process (Balarabe, 2006).

Health workers are all people primarily engaged in actions with the primary intent of enhancing health. This is consistent with the WHO definition of health systems as comprising all activities with the primary goal of improving health – inclusive of family caregivers, patient-provider partners, part time workers (especially women), health volunteers and community workers (WHO, 2006).

PHC manpower is a significant part of management infrastructure. PHC facilities cannot operate meaningfully without reasonably adequate number and qualified health staff. A well performing workforce is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible given available resources and circumstances (World Health Report, 2006).

Specifically, human resources are one of three principle health system inputs, with the other two major inputs being physical and capital. Human resources, when pertaining to health care, can be defined as the different kinds of clinical and non-clinical staff

responsible for public and individual health interventions (Kabene *et al.*, 2006). As arguably the most important of the health system inputs, the performance and the benefits the system can deliver depend largely upon the knowledge, skills and motivation of those individuals responsible for delivering health services (Kabene *et al.*, 2006).

The primary health care services at the grass-root level include health promotion and education, food supply and adequate nutrition, safe water and basic sanitation, maternal and child health including family planning, immunization against common childhood diseases, treatment of common diseases/minor injuries, control of locally endemic diseases, and provision of essential drugs, mental health, oral health and care of the elderly. To carry out these various PHC activities, there is need for establishment of standard minimum staff complement in a given primary health care facility (i.e. number and types of staff required). There are 8 categories of PHC workers commonly listed in most Local Government Areas (LGAs) viz: Medical officer, Public Health Nurse/Midwife, Community Health Officer (CHO), Environmental Health Officer, Lab. Technician, Medical Record Officer, Pharmacy Technician, and Community Health Extension Workers (CHEWs). The TBAs and VHWs are expected to work within the community (Ogundeji, 2000). Each Local Government (LG) is expected to have a comprehensive primary health center (CHC) and each ward, a Primary Health Centre (PHC) (Maternity and dispensary); group of villages of about 1,500-2,000 persons, a Health clinic and a village of about 200-500 persons, a Health post (Ogundeji, 2002).

Nigeria is yet to develop a health manpower plan that describes the categories and numbers of personnel required in any given health facility. The suggested minimum staff complement by Ogundeji (2002) for a comprehensive Primary health center in the LGA Headquarters and Primary Health Centre is as in Table 1.1:

Table 1.1: Suggested minimum staff compliment in PHC Facilities.

Designation	Comprehensive Health Centre/health office	Primary Health Centre
Medical officer	1	-
CHO	3	1
EHO	3	1
Staff Nurse Midwife	3	3
LT	1	-
PT	1	1
MRO	1	1
CHEWs	4	4
Total	17	11

Derived from Ogundeji, 2002

1.2 Problem Statement

For primary health care manpower to be effective and efficient for health services coverage in the local government area according to the NPHCDA guideline, a ward should have 14 PHC workers i.e. a Local government Area with 10 wards should have about 140 PHC personnel. This is not the case in most parts of the country. It is a known fact that there are shortages in the number of skilled primary health care manpower for the effective and efficient delivery of PHC services in many parts of the nation today. (see Tables 1.2 and 1.3).

Table 1.2: Status of PHC staff in LGAs of North West in 1998

States	Medical officers		*CHO/SN/Mw		**EHO		***CHEWs	
	Expected	Available	Expected	Available	Expected	Available	Expected	Available
Jigawa	27	5	1,392	69	351	90	1,188	441
Kaduna	23	39	884	689	299	98	1,012	960
Kano	34	8	1,956	168	442	258	1,496	1,031
Katsina	44	7	932	154	572	128	1,936	1,092
Kebbi	22	11	812	131	286	113	968	1,168
Sokoto	22	10	868	156	286	43	968	870
Zamfara	14	8	604	158	182	38	616	552
Total	186	88	7,448	1,525	2,418	768	8,184	6,114

Sourced from Ogundeji, 2002.

Table 1.3: Status of PHC Staff in LGAs of B Health Zone in 2000

States	Medical officers		CHO/SN/Mw		EHO		CHEWs	
	Expected	Available	Expected	Available	Expected	Available	Expected	Available
Delta	25	13	1,020	374	325	277	1,020	165
Edo	18	6	768	234	234	231	768	279
Ekiti	16	15	700	354	208	106	700	423
Lagos	20	31	932	1,156	320	478	932	431
Ogun	20	20	948	672	320	213	948	621
Ondo	18	18	764	534	234	165	764	855
Osun	30	0	1,312	256	390	315	1,312	871
Oyo	33	2	1,444	392	429	337	1,444	808
	180	105	7,888	3,972	2,460	2,122	7,888	4,453

Sourced from Ogundeji, 2002.

From casual observation, the Federal Capital Territory (FCT) is not an exception. There is need to explore and document the health manpower status in FCT.

1.3 Justification

The low level of interest in human resources issues is surprising if we consider the crucial role played by the health workforce in the process of achieving the objectives set by health policies. There is ample evidence that worker's numbers and quality are positively associated with immunization coverage, outreach of primary care, and infant, child and maternal survival (World Health Report, 2006).

Quality of PHC service delivery is about 20% of expected and existing health manpower is 40 % of expected in FCT (Balarabe, 2006). Though the existing health manpower is reported to be 40% in the FCT, there is no extensive research study that has been carried out on the subject matter in Federal Capital Territory (FCT). Therefore, determining the health manpower status in PHC facilities in the FCT will assist in providing reliable information to enable policy makers develop evidence-based strategy to improve human resource management. This will enable them to achieve the objectives of Primary Health

Care in line with the New National Health Policy making PHC the basic philosophy and strategy for national health development.

1.4 Objectives of the Study

1.4.1 General Objective

To assess health manpower status and factors affecting manpower availability in PHC facilities in the FCT, Abuja so as to facilitate evidence-based decision-making for improved human resource management in the FCT.

1.4.2 Specific Objectives: To

1. Document the number, categories, qualifications, and experience of the primary health care personnel
2. Determine health manpower availability as manifested by
 - (i) Staff- population ratios
 - (ii) Absenteeism/attendance at work
3. Determine health workers' perceptions about their availability and factors affecting their availability
4. Assess the types of primary health care facilities and services provided.

CHAPTER TWO

LITERATURE REVIEW

2.1 Definition of Term:

Availability is an attribute of system performance: It is defined as the fit between the number and type of human and physical resources and the volume and types of care required by the catchment's population served in a defined period of time (Haggerty *et al.*, 2007). Health manpower availability is therefore a fit between the number and type of health human resources and health physical resources required to provide the volume and types of health care to a catchment's population within a specified period of time. The availability of health personnel, according to Research News and Information (2009) includes the demand and recruitment of both professional and allied health personnel, their present and future supply and distribution, and their assignment and utilization. Availability is also defined as the quality of being at hand when needed (free online dictionary). That means health manpower availability is the quality of a health worker being at hand when needed. Availability can be considered in terms of the various health occupations, such as shortages or surpluses of Primary Health Care staff (Gupta *et al.*, 2003). Availability in terms of space and time: encompasses distribution and attendance of existing workers (WHR, 2006).

The availability of health workers is determined by the numbers who graduate from the various training institutions in the country, the number of health staff who retire, resign, die or migrate to other countries. Based on existing staffing norms and standards or demand for health professionals, the supply of health workers is rarely consistent with health needs. Therefore, at various periods either shortages or surpluses occur. For example several fresh medical graduates have to wait for several years to secure

placement to undertake the mandatory internship training before full medical licenses. On the other hand, most states in Nigeria, especially in the public sector, face severe shortages in number of health workers, often aggravated by inadequate distribution and deployment (Chankova *et al.*, 2006).

2.2 The Central Role of the Workforce in the Health Sector

In health systems, manpower is the most important resource and the only active factor which engage all other factors of production i.e. responsible for the effective application of other resources such as drugs, vaccines and supplies to achieve effective health service delivery that will translate to improved health status of the people (Sardhar, 2008: WHR, 2006).

Medicines, clean water, diagnostic equipment and the physical infrastructure of clinics and hospitals are all essential components of a functioning health care system. However, it is the nurses, porters, drivers, laboratory technicians, pharmacists, doctors, cleaners and health managers that are central to drawing together the full mix of inputs to provide high quality and effective services. All aspects of a health care system ultimately depend on people (human resources) to run smoothly and well (Global Health Watch, 2005-2006). Health service providers are the personification of a system's core values – they heal and care for people, ease pain and suffering, prevent disease and mitigate risk – the human link that connects knowledge to health action (WHR, 2006).

Many analysts argue that a major failing of health policies is precisely the insufficient consideration given to Human Resource for Health (HRH) issues. In many reforms, there is discordance between the elevated attention given to issues of financing and structural transformation and the low attention given to HRH issues which are often treated as just another production factor ...The low level of interest in human resources issues is surprising if we consider the crucial role played by the health workforce in the process of achieving the objectives set by health policies (Dussault and Dubois, 2004).

To portray how serious the problem of health manpower is globally, the Director-General of WHO, Lee Jong – Wook in World Health Report, 2006 said, before he took up the

position of Director General, he asked many leaders and decision makers in health what they saw as the most important issue in their countries and the one common theme, whether in developed or developing countries was the crisis in human resources.

The current HRH situation in Nigeria indicates that the availability and distribution of HRH for PHC is far from being adequate, with existence of large disparities among local governments in the same states in the same geo-political zone and the different geo-political zones in the country (HERFON, 2007).

From the foregoing, health manpower availability has great implications for health services provision in a given catchment's population served i.e. the outcome of the health care services provision in a particular population will depend on adequacy or inadequacy in number and quality of health manpower available.

2.3 Health service

Health service is service performed by health care professionals or by others under their direction, for the purpose of promoting, maintaining or restoring health (WHO, 2004). According to the WHO (2011) health services include all services dealing with the diagnosis and treatment of disease, or the promotion, maintenance and restoration of health. They include personal and non-personal health services. Health services are the most visible functions of any health system, both to users and the general public. Service provision refers to the way inputs such as money, staff, equipment and drugs are combined to allow the delivery of health interventions. Improving access, coverage and quality of services depends on these key resources being available; on the ways services are organized and managed, and on incentives influencing providers and users.

2.4 Primary Health Care

Primary health care is the best system for reaching households with essential and affordable care, and the best route towards universal coverage. It is also the best gatekeeper for ensuring that simple conditions receive appropriate and affordable care, at an appropriate and cost-effective level of the health system (Chan, 2007). Primary health care is the key to attaining the goal of health for all people of this country. The WHO

(1978) in Alma Ata defined Primary health care as essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community, through their full involvement and at a cost that the community and state can afford to maintain at every stage of their development in the spirit of self-reliance. It shall form an integral part of the national health system whose central function and main focus is the overall social and economic development of the community.

To achieve the lofty objectives of primary health care, health manpower is a critical element. The efficiency and effectiveness of any health care system depends largely on the quantity and the quality of its workforce. Availability of right number, right skill matched with task will influence greatly access to health services and utilization by the population and its consequent outcomes (WHO, 2006).

Optimizing the performance of existing personnel is crucial to the ultimate well-being of Nigerians because it has an immediate impact on service delivery. Moving away from the traditional focus on inputs (the right number of personnel, in the right place, at the right time with the right skills and support); modern health personnel management focuses on outputs and outcomes. Thus the modern approach is to consider the dimensions of health workforce performance which contribute to better service delivery. These include:

- Availability – distribution and attendance
- Competence – technical knowledge, skills and behaviour
- Responsiveness – courteous treatment of clients
- Productivity – ability to provide maximally effective services and outcomes and to reduce waste of times, skills, etc. (Olumide, 2009).

The dimension of health workforce performance in this study is Availability. Availability indicators as developed by Hornby and Forte (2002) are Staff/population ratios, Absence rates and Waiting time. It should be noted that health of a patient is not improved by manpower itself but by the services it renders. It is therefore imperative that the existing health workforce be adequately motivated to stay and effectively deliver health care

services at the grassroots' level. In this study, health worker is used interchangeably with health personnel, health provider, health manpower, Health staff and Human resource for health.

2.5 Composition of PHC Teams

The composition of a primary health care team (PHCT) should adapt to the specific characteristics of the system and the community in which it provides care. Therefore, there are no universal models that can be used to prescribe a composition that is valid for all places and social contexts. Team composition varies in different countries throughout the Region. Brazil, Costa Rica, and Cuba have reported successful experiences with the use of PHCTs for the provision of health services. In all of these experiences, the common denominators are the family physician and the nurse. Depending on the health system, other professionals are also present in the PHCT. For example, in Cuba the team was initially formed by the family physician and the nurse. The emergence of new health needs and the desire to offer wide-ranging and integrated quality services led to the creation of comprehensive family care groups (GAIF) which include dentists, social workers, and specialties from the secondary level of care (e.g., Internal Medicine, Pediatrics, and Gynecology-Obstetrics), as well as informal participation by community leaders. In Brazil, in addition to the physician and the nurse, the teams include technical staff or nursing assistants, dentists, and community agents, which are community caregivers with a certain level of professional skills and training hired by the Unified Health System (SUS). In Costa Rica, the teams include nursing assistants, primary care technical assistants and, recently, medical record assistants (Pan American Health Organization, 2007).

Field operations of the Ghana Health Service are managed by teams of medical officers, paramedics, and public health nurses at the district and regional levels (Nyonator, *et al*, 2003). In the Eastern Cape of South Africa, outreach teams are the main mechanism for reaching out to the community, and providing household level services. While each team is headed by a Professional Nurse, the Community Health Workers (CHWs) are the essential building block of the system. CHWs allow for a systematic, bottom up and

comprehensive approach to household health services, including health promotion and prevention of disease. In particular, they can provide the necessary support and care in the post natal period to mothers and newborns (Olver *et al*, 2011)

Consequently, there is no uniform definition for the composition of the PHC team at the primary level of care. However, the minimum composition usually includes a physician (i.e., general or family physician), a nurse, and an intermediate-level technician that acts as an assistant or community technician, depending on the needs of the community (Pan American Health Organization, 2007).

Primary health care physicians, nurses, and outreach workers are of particular importance to well-functioning primary health care teams...they function to bridge the gap between patients and health resources, between individual and public health, and between communities and secondary and tertiary care services. Enormous diversity exists in the composition of primary health care teams. They often consist of physicians, nurses, medical assistants, midwives, social workers, community health workers, and others who provide direct patient care (Markle *et al.*, 2007).

The range of available numbers of categories for PHC workers varies from 18 categories in Bangladesh to three-four categories in Bhutan, DPR Korea and Thailand. In the case of some countries that have stationed many categories of PHC workers the health indicators such as under five mortality, maternal mortality rate, and infant mortality rate, etc. are higher than in countries with smaller number of categories of PHC workers (Pak, 2006).

In South East Asia Region, the category of health workers will vary by country and by community according to the needs and available resources. They may include people with limited education who have been given elementary training in health care like “barefoot doctors and traditional practitioners, and trained personnel, such as medical assistants, practical and professional nurses, midwives, feldschers as well as general medical practitioners. Despite some improvement in the development of human resources for health in the Region, both imbalances as well as the lack of relevance of health personnel continue to exist in Member States. The three main issues regarding human resources for

health are: (i) the numerical and distributional imbalance of human resources that are not only wasteful but contribute to poor coverage of health services in Member countries; (ii) inadequate training and technical skills of health personnel that impede the effective delivery of health care, and (iii) the inefficient skills-mix of health personnel, often coupled with poor personnel management, non-existent career structures, inadequate staff supervision, lack of support, poor working environment and lack of opportunities for personal development, all of which lead to inefficient delivery of health care (Pak, 2006).

In a PHC system in Nigeria, health workers would include:

Doctor,

Public Health Nurse/Midwife,

Community Health Officer (CHO),

Environmental Health Officer,

Lab. Technician,

Medical Record Officer,

Pharmacy Technician and

Community Health Extension Workers (CHEWs).

The TBAs and VHWs are expected to work within the community (Ogundeji, 2000).

Primary health care facilities in Nigeria continue to be staffed by a variety of health care workers organized in a civil service hierarchy. At the top are medical officers, or physicians. Below them are community health officers (CHOs), nurses, midwives, senior and junior community health education workers (SCHEWs and JCHEWs), and environmental health officers. A number of health care staff in other categories also work in the health facilities, including lab technicians, pharmacy technicians, medical records officers, dental assistants, health attendants, and security guards (Gupta *et al.*, 2003).

Most PHC facilities, with the exception of Lagos, are staffed by community health workers and nurses and midwives. Community health workers, including Community Health Officers (CHOs), Community Health Extension Workers (CHEWs) and Junior Health Extension Workers (JCHEWs), are unique to Nigeria. These cadres of health care

personnel were introduced by the Basic Health Service Implementation Scheme (1975-1983). They have allowed the staffing of basic health facilities in the country (WORLD BANK, 2010).

2.6 Types of Primary Health Care Facilities

In Nigeria, primary health care facilities form the entry point of the community into the health care system. They include health centers and clinics, dispensaries, and health posts, providing general preventive, curative, Promotive, and pre-referral care. Primary facilities are typically staffed by nurses, community health officers (CHOs), community health extension workers (CHEWs), junior CHEWs and environmental health officers. Local Government Areas (LGAs) are mandated by the constitution to finance and manage primary health care. (Chankova *et al.*, 2006)

2.7 Socio-Demographic Characteristics of Health Personnel

2.7.1 Sex and Age of Health Workers

Men continue to dominate the medical profession, while other health service providers remain predominantly female. Notable exceptions exist, however. Mongolia, the Russian Federation, a number of other former Soviet republics and Sudan report more female than male doctors. Moreover, women are making substantial progress in some regions. The proportion of female doctors in Europe increased steadily during the 1990s, as did the proportion of female students in medical schools. In the United Kingdom, for example, women now constitute up to 70% of medical school intakes. From the limited information that exists on the ages of health workers in different settings, no general patterns can be observed, though some information is available for specific countries. For example, an increase in the average age of the nursing workforce over time has been noted in a number of OECD countries, including the United Kingdom and the United States (WHR, 2006).

Socio-demographic elements such as age distribution of the population also play a key role in a country's health care system. An ageing population leads to an increase in demand for health services and health personnel. An ageing population within the health care system itself also has important implications: additional training of younger workers will be required to fill the positions of the large number of health care workers that will be

retiring. Workforce training is another important issue. It is essential that human resources personnel consider the composition of the health workforce in terms of both skill categories and training levels. New options for the education and in-service training of health care workers are required to ensure that the workforce is aware of and prepared to meet a particular country's present and future needs. A properly trained and competent workforce is essential to any successful health care system (Kabene *et al.*, 2006).

Humphreys *et al.*, 2009 reported that most services considered two years a reasonable length of service for doctors, nurses, physiotherapists, mental health workers/psychologists, social workers, podiatrists, and Indigenous health workers, and three years was seen as reasonable for managers. Employee longevity is important because it takes time for the worker and client to build enough trust to interact successfully and high turnover can lead to reduced productivity or burnout from staff covering the vacant position, thereby affecting the organization's ability to fulfill its program goals efficiently and effectively.

In a study carried out by Gupta *et al.* (2003), the average age of staff was 41 years, but doctors were younger than the rest of the cadre, with an average age of 30 years. A large majority of health staff were women, with exceptions again being doctors (50%) and environmental health officers (21%). The large majority of staff in almost all categories had some amount of executive summary post-secondary education. Only about 28% of staff was indigenous to the communities in which they are working, with percent indigene ranging from 0% for doctors to 41% for nurses. Staff had on average 14 years of experience in primary health care, but doctors had relatively less experience, with an average of 2.6 years of work in the field. The average length of tenure in the current facility was short, about 2.7 years. Medical officers had been working in the current facility for three months... and nurses and midwives had an average tenure in the current facility of less than two years. Senior and junior health education workers had longer tenures.

2.7.2 The Number of Health Workers

The number of health workers available in a country is a key indicator of that country's capacity to provide delivery and interventions. There is evidence of a significant positive correlation between the level of economic development in a country and its number of human resources for health. Countries with higher gross domestic product (GDP) per capita spend more on health care than countries with lower GDP and they tend to have larger health workforces. This is an important factor to consider when examining and attempting implement solutions to problems in health care systems in developing countries (Kabene *et al.*, 2006).

Kurowiski and colleagues assessed health worker availability against health system needs in Tanzania and Chad. They showed first that there are stark gaps between the number of health workers available and the number needed for provision of basic health services in these countries (Hongoro and McPake, 2006).

Ample evidence exists that the number, quality and distribution of health personnel strongly affect health outcomes. For example, birth outcomes are strongly associated with the presence of a skilled birth attendant at deliveries. A minimal density of health workers is needed to ensure that all women will have access to a skilled attendant ((Markle *et al.*, 2007). Human resource is not all numbers; it involves distribution, quality, and productivity i.e. HRH involves getting the right number of staff, in the right places, at the right time, who is doing the right job, with the right motivation, and at the right cost to sustain the health sectors (HERFON, 2006).

2.8 Availability, Skill Mix and Distribution of Health Personnel

Attaining health objectives in a population depends to a large extent on the provision of effective, efficient, accessible, viable and high-quality services by personnel, present in sufficient numbers and appropriately allocated across different occupations and geographical regions (Dussault *et al.*, 2003).

The availability and distribution of PHC personnel is said to be a concern of human resource policy because availability and distribution have major implications for the performance of not only the health personnel but the PHC system as a whole. Provision is made in 2006 draft national human resource for health policy for planning the current and future needs and requirements at all levels. The result of such planning will be the determination of the numbers, categories and quality of health personnel required in the right mix and distribution (HERFON, 2007).

In general, the health personnel to population ratios in Africa have been high and have always lagged behind the rest of the world. In the 1980s, one doctor catered to 10,800 persons in sub-Saharan Africa (SSA), compared to 1,400 in all developing countries and 300 in industrial countries. In the same period, one nurse catered to 2,100 persons in Africa, compared to 1,700 persons in all developing countries and 170 in industrial countries (World Bank, 1994). The provider-to-population ratios persistently remained high in the 1990s... with most countries having 1 doctor per 10,000 population or more. In fact, ten countries have 1 doctor per 30,000 population. Comparable countries like Bolivia, Honduras, and India have 1:2,000 or 1:3,000 ratios. Thirty-one countries do not meet WHO's "Health for All" standard of 1 doctor per 5,000 population. Even those that do have enough doctors, geographic mal distribution is so severe that there may be a 1:500 ratio in the city (Nairobi) while remote Turkana District suffers from a 1:160,000 ratio. Even in South Africa, a better endowed country, poor districts may only have 1 doctor for a population of 30,000 (Huddart and Picazo, 2003)

Within Africa, there is a considerable variation in health personnel availability. There are nearly ten times as many doctors in South Africa as there are in Lesotho; and there are five times as many nurses in Botswana as there are in the Democratic Republic of the Congo (DRC) (EQUINET and MEDACT, 2007).

Inequity in the distribution of health personnel between urban and rural areas has been documented in a number of southern African countries. Rural-urban inequalities in the distribution of specialist and highly skilled health personnel trace back to the

concentration of such personnel within higher levels of the healthcare system mainly located in urban areas and weak outreach, support or supervision links from these services to the peripheral services in their catchment area. Hence, for example, inequalities tend to be worse for doctors compared to nurses and for specialist Medical officers compared to generalist doctors; in part because secondary and tertiary institutions are mainly found in cities and large towns. The urban location of most hospitals, where the majority of health workers are concentrated, makes it inevitable that health workers are mostly in the cities (EQUINET and MEDACT, 2007).

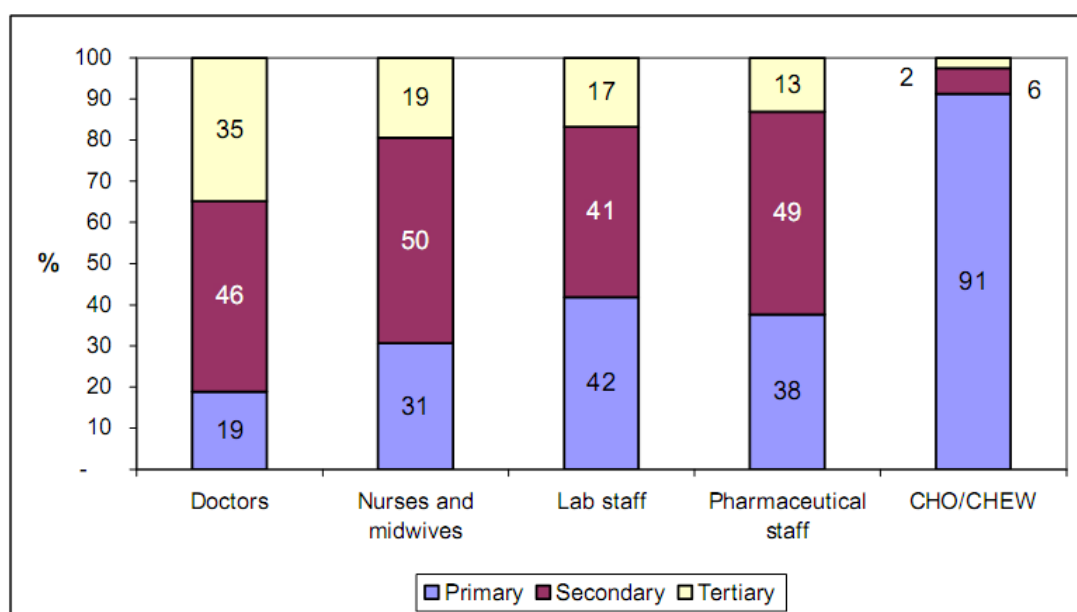
In India, evidence suggests that for the most part, formally trained and qualified doctors in rural areas are available mainly through the government's public health system. A comparison of these public sector doctors available in the rural PHCs and CHCs in the public health system in different states, with the total numbers of doctors reveals sharp contrasts. The ratio of rural doctors to the total rural population is far less than the ratio of total doctors to total population. The median stands at 1 doctor per 17,230 populations (WHO, 2007).

It has been observed that apart from Egypt and South Africa, Nigeria has one of the largest stocks of human resources for health in Africa. The number of registered doctors in 2003/2004 was about 35,000 while that of nurses was 210,000 meaning 28 doctors and 170 nurses per 100,000 population. These ratios are well above the sub-Saharan average of 15 doctors and 72 nurses per 100,000 population. In spite of the large stock, of human resources for health, the health status of ordinary Nigerians is one of the worse in sub-Saharan Africa (WHO, WHR, 2006).

A situation assessment of human resources in the public sector in Nigeria by Chankova *et al.*, in 2006 based on the staffing situation of surveyed facilities, estimated that in 2005 the public sector in Nigeria had about 17,800 doctors, 122,000 nurses and midwives, and 86,600 community-level Health staff (CHOs/CHEWs). This translates to 13 doctors, 92 nurses and midwives, 10 pharmacists, and 64 CHOs/CHEWs in the public sector per 100,000 population. The health work force per population indicators in 2004 and 2006 were

similar to those in 2005. The distribution of health workers by level of care shows that the primary care level has 19 percent of doctors, 31 percent of nurses and midwives, 42 percent of lab and 38 percent of pharmaceutical staff working in the public sector (figure 2.1.). CHOs/CHEWs are present predominantly at primary level facilities, while the secondary and tertiary levels of care have the majority of all other staff categories, which can be explained in part by the higher complexity of services provided at these levels.

Figure 2.1 Distributions of Public Sector Health Workers by Level of Care in Nigeria, 2005



Source: Chankova *et al.*, 2006

Table 2.1 presents the average number of key staff per facility by level of care. Each primary Facility has on average 0.23 medical doctors (or there is, on average, one doctor for every four Primary facilities). The average secondary level facility (general hospital) in Nigeria has about 5 doctors, while a tertiary hospital has an average of 62 doctors. While there are, on average, about 3 nurses/midwives per primary facility, a lab worker can only be found in half of primary facilities, and there is one pharmacy staff worker for each three such facilities. The vast disparity in staff number among levels of care is not

surprising given the very different tasks they assume... CHOs/CHEWs are most frequently found in primary facilities there are about 6 per facility.

Table 2.1 Average Number of Public Sector Health Workers per Facility by Level of Health Care in Nigeria

HRH Category:	Number per facility		
	Primary	Secondary	Tertiary
Doctors	0.2	5.0	62
Nurses and midwives	2.6	41.0	284
Lab staff	0.5	4.3	28
Pharmaceutical staff	0.3	4.2	18
CHOs/CHEWs	6.1	3.4	18

Source: Chankova, 2006

In relation to recommended national standards, most PHC facilities are understaffed. NPHCDA has established a minimum ward health care package to be provided by 2012. To provide this package, NPHCDA sets recommendations concerning the staffing of all PHC health facilities. However, on average, very few have this recommended number and skill mixed of staff as of now. For instance, on average, the sampled clinics and health centers do not meet the proposed standard for clinics, let alone that of health centers, as they have less than 4 JCHEWs, less than 2 CHEWs, and less than 3 nurses/midwives on staff (WORLD BANK, 2010).

On average, facilities in urban LGAs have more staff than those located in predominantly rural LGAs. As seen in table 3.9, PHC facilities located in urban LGAs, on average, have about 13 workers, almost twice as many as facilities located in rural LGAs. These facilities are more likely to have doctors, nurses, and midwives on their staff than facilities located in predominantly rural or semi urban LGAs. In contrast, facilities in rural LGAs on average are likely to be staffed by CHEWs (WORLD BANK, 2010).

Table 2.2 Average Staffing of PHC Facilities across LGA Type

	Rural	Semi-urban	Urban
Total	7.4	9.8	13.1
Doctors	0.2	0.7	1.3
Community health officers	0.2	0.4	0.5
Nurse	0.4	0.9	2.6
Midwives	0.4	1.4	1.6
CHEW	1.1	0.9	0.8
JCHEW	0.7	0.8	0.6
Primary health worker	0.2	0.3	0.2
Community- based worker	0.4	0.2	0.1
Environmental health officer	0.1	0.1	0.1
Lab technician	0.2	0.2	0.5
Pharmacy technician	0.1	0.2	0.3
Medical records officer	0.2	0.2	0.4
Dental assistant	0.0	0.0	0.1

Source: Health Facility Survey (EPOS, CSIH, CHESTRAD, 2007).

2.9 Human Resources Requirements for Primary Health Care in Nigeria

Although minimum staffing levels are not clearly described, there is available information giving a clear description of the various categories required at the lower primary health care level (NPHCDA, 2004). Based on the recommendation of the World Health Organization (1994), the World Bank Publication (1995), Tulsii Chanrai Foundation report of 2001 and findings on PHC from the case studies of Primary Health Centres in Nigeria, carried out in November 2001, the following was proposed by the NPHCDA as the minimum health manpower requirement for Primary Health Care:

- a. Health Post
 - 1 JCHEW
- b. Primary Health Clinic
 - 2 Community Health Extension Workers
 - 4 Junior Community Health Extension Workers (JCHEWs)

- c. Primary Health Centre (Ward Health Centre)
- 1 Community Health Officer (CHO)
 - 1 Public Health Nurse (PHN)
 - 3 Community Health Extension Workers (CHEWs)
 - 1 CHEW is responsible for Statistics
 - 1 CHEW is responsible for Drugs
 - 1 CHEW is responsible for Equipment
 - 6 JCHEWs
 - 4 Nurse/Midwives
- Where available,
- 1 Medical Records Officer in charge of statistics.
 - 1 Pharmacy Technician in charge of drugs.
 - 1 Medical Officer or an oriented NYSC Medical officer should work from the ward Health Centre.
- d. PHC Department (at the LGA Secretariat)
- Functional LGA PHC Management Committee.
 - 1 MOH as PHC Coordinator/Director.
 - 3 CHOs as Assistant PHC Coordinators.
 - 1 Nurse/Midwife.
 - 2 – 3 EHO
 - 2 CHEWs
 - 2 JCHEWs
 - 1 Administrative Officer. (NPHCDA, 2007).

Sibbald, Shen and McBride define skill mix as the “mix of skills or competencies possessed by an individual; ratio of senior to junior grade staff within a single discipline; or mix of different types of staff within a multidisciplinary team”. Other terms used in the literature for similar concepts include “task shifting” and “task delegation” which involves shifting tasks from one group of health care workers to another lower-level group or to a new group of workers entirely (Bourgeault *et al.*,2008).This conceptualisation focuses on the proportion of highly qualified staff members in the overall pool of professional

resources. As yet, there is no indication of the appropriate ratio for any grade on the health care team, although several observational studies support the view that a rich mix of qualified personnel with advanced degrees or specialty certifications is associated with better clinical outcomes (Dubois and Singh, 2009).

2.10 Staff Population Ratio

There are large differences in the health workers/population ratios between rural and urban areas in Nigeria. The staffing pattern is skewed in favor of secondary and tertiary care partly due to the complexity of services at this level and the strong pull factor for health workers in urban locations. On the average, urban residents have more access, nearly twice or thrice, to health workers than rural residents. The only exceptions are Community Health Officers and Community Health Extension Workers who are more in the rural areas ((Chankova *et al.*, 2006).

An inadequate health workforce (with a high population-to-health worker ratio) contributes to the general deterioration of health indicators (Dolvo 1999; Dolvo, 2002; Dolvo, 2003) cited in (Ndetei *et al.*, 2008).

Personnel inadequacy is one of the major problems confronting health care delivery in Nigeria. The present doctor/population ratio of 1:12,300 and nurse/population ratio is 1:3360, which is against the WHO (1961) recommendation of 1: 10,000, and 1:1500 respectively is enough evidence of this problem (Omofonmwan, 2004). This problem is worse in the rural areas where about 70% of the population lives and where only about 20% of the facilities and personnel are concentrated (Bello-Imam, 2002). It is established that doctor/population ratio in the rural areas is between 1:40,000 to 1:200,000 (Akhayere, 2002) cited in (Ojeifo, 2008).

World Health Organization (WHO) recommends a minimum of one doctor per 10,000 of population (HERFON, 2007). Using this WHO standard means Nigeria will need 14,000 doctors for its estimated 140 million people. This will translate to 18 Medical officers per each of the 774 LGAs in the country. Assuming a distribution of the doctors among the

tertiary, secondary and primary levels of the health system in the proportion of 40%, 35% and 25%, this would provide that at least four doctors are located in the PHC system at the LGA level (HERFON, 2007).

Based on the population and the number of the types of health facilities according to the Ward Health System in each area council, the ideal staff population ratios (SPR) per 100,000 population were computed for each category of health personnel as shown in Table 2.3 below.

Table 2.3: Ideal SPR /100,000 for the various Area Councils in the FCT

SPR/100,000	Medical officer	CHO	PHN	CHEW	JCHEW	N/Mw	MRO	PTec	LTec
FCT	4.8	4.8	4.8	114.6	429.3	19.4	4.8	4.8	4.8
ABAJI	18.8	18.8	18.8	155.7	511.6	75.3	18.8	18.8	18.8
AMAC	1.7	1.7	1.7	104.9	410.0	6.7	1.7	1.7	1.7
BAC	4.8	4.8	4.8	114.9	429.6	19.4	4.8	4.8	4.8
G/LADA	7.0	7.0	7.0	121.1	442.4	27.9	7.0	7.0	7.0
KUJE	11.3	11.3	11.3	134.5	469.4	45.2	11.3	11.3	11.3
KWALI	12.8	12.8	12.8	138.6	477.7	51.3	12.8	12.8	12.8

Derived from NPHCDA 2004

Key:

Ptec Pharmacy Technician

Ltec Laboratory Technician

The proposed ideal minimum health manpower requirements for the FCT in Table 2.4 is based on 1 Comprehensive Health Centre for each area council, 1 Primary Health Centre for each ward, 1 Primary Health Clinic for a population of 2,000 and 1 Health Post for a community of 200-500 people.

Table 2.4: Proposed Ideal Minimum Health Manpower Requirements for PHC in FCT by Facility Type according to the Ward Health System

Facility	Medical Officer	CHO	PHN	CHEW	JCHEW	N/Mw	MRO	PTec	LTec	Total
CPHC	6	6	6	18	36	24	6	6	6	114
PHC	62	62	62	186	372	248	62	62	62	1178
PHCC	-	-	-	1,406	2,812	-	-	-	-	4,218
HP	-	-	-	-	2,812- 7,026	-	-	-	-	2,812- 7,026
Total	68	68	68	1,610	6,032- 10,246	272	68	68	68	8,322- 12,483
SPR/100, 000	4.8	4.8	4.8	114.6	429.3	19.4	4.8	4.8	4.8	592.2- 888.3

Derived from NPHCDA 2004

Staff/Population Ratio (SPR) for senior PHC staff varies between zones of the country. For instance, for medical officer of health, the South West Zone has a ratio of 1:164,110 compared to the North West Zone, which has a ratio of 1:480,313. In the same area, for the PHC health personnel notably the community health officer (CHO), the North Central Zone has a ratio of 1:20,494 compared to the South East Zone with a ratio of 1:59,679 (NPHCDA, 2001).

2.11 Health Personnel Retention and Incentives

Medical, nursing and allied health professionals employed by the public sector in Fiji are eligible for a country allowance“ if they work in a rural area. Doctors are also offered an on-call allowance if they work in a rural or remote area. In these locations housing is also provided. Public and private sector doctors are allowed to undertake locum work, with some doing up to 20 hours per week in hospitals (The Human Resource for Health Hub @ University of New South Wales, 2009).

According to the feedback Ndetei *et al.*, 2008 received from health workers in a study in Kenya, health workers highly valued a number of non-financial incentives such as, improved working conditions, training and supervision, good living conditions,

communications, health care and educational opportunities for themselves and their families.

2.12 Factors Encouraging Availability of Existing Staff

The levers thought to be most effective at increasing the availability of existing staff are those related to salaries and payment mechanisms, together with the materials to “do the job” and a degree of independence allowed to individual health workers to manage their work - whether in the management and deployment of staff for managers, or in clinical decisions for health care providers. Job descriptions and codes of conduct may also help, by providing clarity and the sense of professionalism which often appears to sustain health workers in difficult conditions (WHR, 2006). Among the factors that were reported to be most effective in workforce retention were affordable accommodations, financial incentives were most important, professional development opportunities, adequate workloads, recruiting the right people and helping people integrate into the community. Others were supportive supervision and mentoring, and continuing professional development. Half recruited rural origin workers, and employed improved infrastructure and paid housing and/or vehicle to encourage doctors and other health workers to stay longer in their health service (Humphreys *et al.*, 2009).

2.13 Implications of Health Personnel Shortages

Although available data do not allow a simple response, coverage rates of key interventions are generally lower in areas with relatively low numbers of health workers, compared with those that have higher concentrations. For example, researchers have recently found that countries with a higher density of health workers attain higher levels of measles vaccination and coverage with antenatal care. The correlation between the availability of health workers and coverage of health interventions suggests that the health of the public suffers when health workers are scarce (World Health Report, 2006).

An assessment of health worker performance in the management of children with acute respiratory infections (ARI) in two local government areas (LGAs) in Nigeria found that; many of the health workers had not attended a continuing education program in the

previous two years and supervision which could have provided on-the-spot training was irregular. Improvements in ARI case management will require attention to policy, logistics, training (including in-service education) and supervision (Fagbule & Kalu, 1995).

At the heart of each and every health system, the workforce is central to advancing health. There is ample evidence that worker numbers and quality are positively associated with immunization coverage, outreach of primary care, and infant, child and maternal survival. The quality of doctors and the density of their distribution have been shown to correlate with positive outcomes in cardiovascular diseases. Conversely, child malnutrition has worsened with staff cutbacks during health sector reform (World Health Report, 2006).

WHO has identified a threshold in workforce density below which high coverage of essential interventions, including those necessary to meet the health-related Millennium Development Goals (MDGs) is very unlikely. The Joint Learning Initiative (JLI), a network of global health leaders, launched by the Rockefeller Foundation, suggested that, on average, countries with fewer than 2.5 health care professionals (counting only doctors, nurses and midwives) per 1000 population failed to achieve an 80% coverage rate for deliveries by skilled birth attendants or for measles immunization (World Health Report, 2006).

Where there are health worker shortcomings, health systems will suffer, resulting in preventable death and disease. Severe shortages in the health workforce increase the workload on the few who are working and this impact negatively on the quality of services, staff motivation, and productivity (HERFON, 2006). Due to the shortages, it has been found that the level of health service in rural or poor areas has decreased, leading to lower quality and productivity of health services, closure of hospital wards, increased waiting times, reduced numbers of available beds for inpatients, diversion of emergency department patients and underuse of remaining personnel or substitution with persons lacking the required skills for performing critical interventions (Kabene *et al.*, 2006).

According to Mullings and Tomlin (2007), the Ministry of Health of Jamaica has recorded an increased vacancy rate among groups such as enrolled nurse assistants and pharmacists. Other groups, including registered nurses, midwives, public health inspectors, and public health nurses, are at critically low levels. The loss of health personnel has resulted in significant staff shortages in many areas and has adversely impacted the delivery of PHC.

The lack of health personnel can also mean that other healthcare investments become wasted, such as when healthcare facilities lie dormant because there aren't any personnel to staff them. In one example, the departure of two anesthetists from a South African spinal injuries centre to Canada resulted in the entire centre being forced to close. Counter-productive behaviours may also result from staff shortages, including absenteeism; salary-augmenting behaviour (second job); pilfering of public property; poor treatment of patients; under-the-counter fees, and the sale of drugs that should be free (EQUINET and MEDACT, 2007).

2.14 Challenges of Human Resource for Health (HRH).

According to the World Health Report (2006), the African Region has 24% of the global disease burden but only has 3% of health workers and commanding less than 1% of world health expenditure. The World Health Organization estimates that sub-Saharan Africa is suffering a shortage of more than 800,000 doctors, nurses, and midwives, and an overall shortfall of nearly 1.5-million health workers. Nigeria is one of the 36 sub-Saharan African countries with critical health manpower shortage (World Health Report 2006). Human resources for health - the personnel that deliver public health, clinical, and environmental services are in disarray and decline in much of the developing world, particularly in sub-Saharan Africa (Narasimhan *et al.*, 2004).

In developing countries, and particularly in Africa, attempts to reform the health care sector have frequently failed to respond to the aspirations of staff concerning remuneration and working conditions. Salaries are often inadequate and may be paid late, and health workers try to solve their financial problems in a variety of ways. Private practice is only one of the many survival strategies that health personnel use to supplement their income and increase their job satisfaction. Teaching, attending training courses, supervision

activities, research, trade and agriculture are some of these alternative strategies (Zurn *et al.*, 2004).

The lack of explicit policies for Health Resource for Health development has produced, in most countries, imbalances that threaten the capacity of health care systems to attain their objectives (Dussault *et al.*, 2003). The absence of appropriate human resources policies is responsible in many countries, for a chronic imbalance with multifaceted effects on the health workforce: quantitative mismatch, qualitative disparity, unequal distribution and a lack of coordination between Human Resource Management actions and health policy needs (Dussault *et al.*, 2003).

Skill mix and distributional imbalances compound today's problems. In many countries, the skills of limited yet expensive professionals are not well matched to the local profile of health needs. Critical skills in public health and health policy and management are often in deficit. Many workers face daunting working environments – poverty level wages, unsupportive management, insufficient social recognition, and weak career development among others (WHO, 2006).

The problem of geographical imbalance among HRH across countries in the developing world holds important implications at the local, national and international levels, in terms of constraints for the effective deployment, management and retention of HRH, and ultimately for the equitable delivery of health services (Gupta *et al.*, 2003). Imbalances, especially shortages of skilled health personnel in rural or poor areas, are reported to have a number of adverse consequences for health system performance. The potential negative consequences include lower quality and productivity of health services, closure of hospital wards, increased waiting times, reduced numbers of available beds for inpatients, diversion of emergency department patients and under-utilization of remaining personnel or substitution with persons lacking the required skills for performing critical interventions (Gupta *et al.*, 2003).

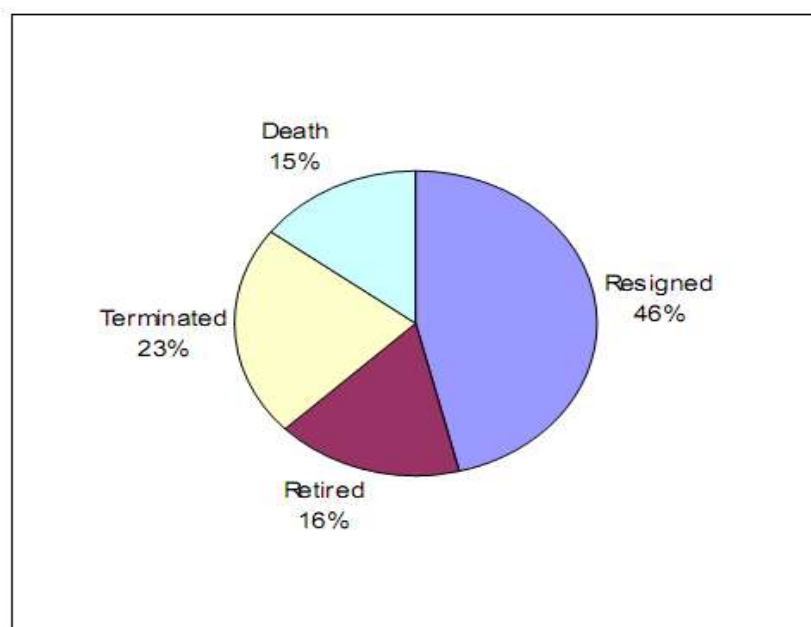
The most valuable asset in any health system is the human resources. However, more often than not, health workers are sent out to remote areas where:

- Even the most basic equipment to do their work is lacking;
- Salaries are paid late if at all;
- Basic drugs and consumables are not provided;
- The physical infrastructure of the clinics is falling apart;
- Accommodation is not provided and transport is not available; and
- Promotions are delayed. (Asoka and Sule, 2006)

Another problem is migration of health workers fuelled by certain conditions (push factors) such as low pay, poor career prospects, lack of opportunity for professional advancement, adverse social and political conditions. These professionals migrate to industrialized countries because of the attractive and enticing working conditions such as promises of better remuneration, better work environment, and better career development prospects (HERFON, 2006).

In 2005, it is estimated that the public sector in Nigeria lost at least 7,400 staff in the categories included in this assessment. The main reason for staff attrition is resignation (accounting for nearly half of total staff attrition), followed by contract termination (23percent). Staff who retired or died in 2005 accounts for a third of total attrition (Figure 2.2).

Figure 2.2: Distribution of Reasons for Leaving the Public Health Sector in Nigeria, 2005



Source: Chankova *et al* 2006

The main reason for health worker attrition (all cadres combined) at each level of facility was retirement, followed by resignation and death. However, resignation drives attrition among doctors and clinical officers; retirement accounts for the main share of attrition among nurses and pharmacy staff; and death is the primary reason for attrition among laboratory staff, particularly in district hospitals. Health workforce attrition in the public sector in Kenya: a look at the reasons. The main reason for health worker attrition at each level of facility, when looking at all cadres combined, was retirement (accounting for 48% to 58% of total attrition at the average facility), and followed by resignation and death. Resignation accounted on average for 40% of HRH attrition in provincial hospitals, 35% of attrition in district hospitals and 25% of attrition in health centres (Chankova *et al.*, 2009).

There are several challenges confronting the management of human resources in the Nigerian health system. These include the paucity of accurate and comprehensive data on the human resources for health (HRH) situation. One finds that data is either non-existent

or incomplete or inaccurate. The actual number of health personnel working at the PHC level is unknown talk less of having accurate information on the various cadres. The data that exist indicate that the personnel are unevenly distributed with more shortages in the northern zones and rural areas of all zones. Furthermore, the PHC workforce is inadequate in relation to health needs throughout the entire country (Olumide, 2009).

The major challenge Nigeria faces is how to ensure availability and retention of adequate pool of competent human resources in their right mix to provide health care in areas where their services are in most need (Zero Draft National Human Resources for Health Policy, 2006).

Shortages of health workforce are perceived to be widespread and supply of health care professionals and other service providers are inadequate to meet requirements. Coupled with the above the uneven distribution of competent health workforce deprives many groups access to life-saving services, a problem exacerbated by migration in the open labor markets that draw skilled workers away from the poorest communities and countries (Zero Draft National Human Resources for Health Policy, 2006). It is generally perceived that health professionals are not sufficiently oriented to the health needs of the population they are serving. Learning strategies are still centered on teaching rather than learning, thereby limiting the effectiveness of education. The lack of public health expertise is also believed to have failed to prepare graduates from the numerous health training institutions for the challenges of practice in primary health care settings (HERFON, 2006).

One of the problems affecting the health sector is the lopsided distribution of health professionals in favor of urban centres. Also, some categories of health manpower are in short supply. There exists an uncomfortable mix of under-utilization and over-utilization of the skills of health professionals depending on the geographic location and professional category/sub-category involved (WHO, 2009).

This problem of staff shortage has its root mostly in poor funding, planning and management. A lot of the problems relate to recruitment both for basic training and

employment, deployment, supervision, appropriate utilization and retention. WHO, (SHS/DHS/92.1 p.22) remarked that Nigeria has an impressive number of health personnel. Unfortunately, most of them either work in urban areas or wrongly deployed. A Nigerian review listed lack of trained staff, e.g., midwives and de-motivated community health extension workers and lack of basic essential obstetric care as some of the major constraints to the achievement of the health related millennium development goals in Nigeria (Asuzu and Ogundeji, 2007).

Common problems militating against staff availability and quality services delivery in FCT include:

- Embargo on employment,
- Poor funding resulting in lack of scarce resources to employ health manpower adequately for the overall health services coverage by the Area councils,
- Uneven distribution of health facilities and workers,
- Insufficient number of skilled staff,
- Inadequate remuneration,
- Poor support system,
- Inadequate and obsolete equipment,
- poor access to information and knowledge resources;
- Non - availability of essential drugs
- Lack of supportive supervision,
- Limited career opportunities within the civil service,
- Low morale of the health workers resulting in counterproductive behavior among them (Balarabe, 2006).

These problems are due to many factors among which are extraneous factors like poor economic growth and fiscal problems resulting in cutbacks in the number of health workers. Other contributory factors are misdirected human resource and training policies, weak institutions and inappropriate structures (Balarabe, 2006).

Health workers in underserved areas usually have motivational problems at work which may be reflected in a variety of circumstances, but common manifestations include: lack of courtesy to patients; failure to turn up at work on time and high levels of absenteeism;

poor process quality such as failure to conduct proper patient examinations and; failure to treat patients in a timely manner. These challenges can be addressed by increased funding of the health sector and the introduction of multiple incentives to health workers to make working in unattractive areas more appealing (Uneke, 2008).

In South Africa, study by Klaas & Nondumiso Primrose (2009) on factors influencing retention of nurses in the rural health facilities of the Eastern Cape Province reported that nurses are dissatisfied with lack of promotional opportunities, lack of professional support, facing drastic responsibilities but with less income, tremendous workloads, emotional demands and unrealistic salary package.

2.15 Strategies for Solving PHC Manpower Challenges

The major evidence-based strategies proffered include the use of written job-descriptions, the creation and support of professional codes of conduct, matching tasks with skills, applying supportive supervision, appropriate and regular remuneration, the use of incentives, the provision of adequate information and communication, the institutionalization of a culture of monitoring, evaluation and feed-back, the improvement of infrastructure and supplies, the establishment of an enabling work environment, the promotion of life-long learning, the establishment of effective team management, and the institutionalization of a culture of accountability. The skillful and conscientious application of these strategies would adequately address the human resource challenges in PHC. The paper emphasizes that moving from rhetoric to action will require drastic changes in our human resource management practices and that stake-holder and community participation are vital for the sustainability of the required changes (Olumide, 2009)

The best approach in addressing the HRH issue is to focus on all the problem areas of staffing, education and training, performance management, and working conditions in a comprehensive way. It is also essential that health personnel are trained to undertake tasks expected of them. However training itself will be of no benefit if personnel are not motivated or are not able to perform their tasks because of unsatisfactory incentives and

working conditions or because they just do not have the necessary tools and supplies to do these tasks. (HERFON, 2006).

2.16 Dealing with HRH Challenges from other Countries Experiences.

In dealing with the challenges facing HRH in Nigeria, it is important to examine the experience of other countries. It is to be noted that no country has HRH programs that can provide an all round system of best practice but have areas of best practices that other countries can learn from.

The success story in primary health care in some countries as recorded by Asuzu and Ogundeji (2007) are as follows:- In Sweden, success occurred because public health authorities developed a policy of training enough midwives to make sure that qualified personnel would attend all home births. In Cuba, the best medical graduates are specially induced to specialize in community medicine so that they will serve their people as best as possible. In Fiji for example, the same (national) Government of Fiji employed every health service worker whether he worked at the national, regional or local government level health service and in South Africa, they changed their three and half years of basic nursing training to a 4 year program with the first 3 years in general nursing and the entire final year in community nursing. Thus since the beginning of effective PHC there, every nurse graduating from the nursing schools is prepared, well orientated and competent to deliver PHC.

In Jamaica, a system of categorizing and providing for the personnel mix for PHC facilities is practiced. This system (Table 2.5) has five different levels of primary care units with each ascending level having a mix of personnel that enables it to deal comprehensively with the health problems of the community as envisaged by the Alma Ata Declaration. The system also reduces pressure on the secondary and tertiary levels of care and ensures that most of the health needs of the community can be met at that level.

Table 2.5: Jamaica – Different Types of Personnel mix for Different levels of Primary Health Care Centres in Communities.

Health Centre Type	Level of Personnel	Services Provided
Type 1	Midwife, Community Health Aide	Maternal & Child Health and Home visits
Type 2	Public Health Nurse, registered Nurse, Public Health Inspector, Doctor and visiting Dentist	Maternal & Child Health, Dental care, curative, Environmental Preventative and Promotive.
Type 3	Doctor, Dentist, Nurse Practitioner, Public Health Nurse, Public Health Inspector, Registered Nurse.	Maternal & Child Health, Dental care, curative, Preventative and Promotive.
Type 4	Doctor, Dentist, Nurse Practitioner, Public Health Nurse, Public Health Inspector, Registered Nurse.	Maternal & Child Health, Dental care, curative, Preventative and Promotive.
Type 5	Doctor, Dentist, Nurse Practitioner, Public Health Nurse, Public Health Inspector, Registered Nurse.	Maternal & Child Health, Dental care, curative, Environmental Health Preventative and Promotive and Specialist services

Source: HERFON, 2007.

Experience from Ghana and South Africa indicates that the production, training of health care personnel can be improved through Promotive and preventative health interventions that focus on public and community health with emphasis on developing health staff categories such as ‘medical assistants, clinical officers, community health staff and traditional healers’ In Botswana, nurses training equip them to prescribe medication in the absence of a Medical officer. In Malawi, health surveillance assistants who are the largest and most widely used group of health workers receive training for six weeks that prepare them for their roles (EQUINET and MEDACT, UK, 2007). Research in Malawi’s health facilities has shown that factors other than pay, such as training and career advancement are critical in retaining and motivating existing staff (IDS, 2008).

In Ghana, some measures have been adopted to motivate and retain health personnel especially in rural areas. These included the establishment of a prize fund in Ghana to reward and recognize outstanding performance by individuals and groups; the provision of generous end – of – service payments, subsidized house owning schemes and car ownership in Namibia (Martineau, T Decker, K. and Bundred, P. 2002). Ghana has developed two training programs which successfully combine appropriate curriculums and policies for developing human resources. With guidance and support from the American College of Obstetricians and Gynecologists and the Royal College of Obstetricians and Gynaecologists, two Ghanaian medical schools now operate the Ghana Residency Programs in Obstetrics and Gynaecology. This program provides trainees with sound clinical knowledge and appropriate skills for practicing in both hospital and community settings. The program has produced a steady stream of obstetric specialists, practically all of whom are still working in Ghana. A program for training midwives in lifesaving skills, run by the Ghana Registered Midwives Association in both the private and public sectors, has successfully enabled midwives to deal alone with some emergencies and also stabilize patients before referral for more specialized emergency obstetric care (Lucas, 2005)

Such training might be partially funded by health services in the countries which welcome health workers from Africa, thereby providing mutual benefit. And countries such as Nigeria, which produces more trained health personnel than its health system can use effectively, might benefit from a program of managed emigration. Other measures that helped attract and retain HRH for PHC in different African countries have included the training institutions, the introduction of recruitment quotas to ensure that the most peripheral (or rural) areas are represented among medical students, and making rural field experience during medical training compulsory (EQUINET and MEDACT, 2007).

Indonesia has also used the opportunity for specialist training and continuity to attract and retain Medical officers in rural areas (EQUINET and MEDACT, 2007).

Although some of these measures have been employed in Nigeria, there is the need to develop measures that will attract and retain other categories of PHC personnel other than doctors that can provide a variety of services at the PHC level such as improving working conditions, basic social amenities.

CHAPTER THREE

MATERIALS AND METHODS

3.1 Description of the study area:

The Federal Capital Territory (FCT) is located in the geographical centre of Nigeria. It lies above the hot humid lowlands of the Niger/Benue trough but below the drier parts of the country to the North. The entire Federal Capital Territory occupies a land area of 8,000 square kilometers (sq km) while the Federal Capital City (Abuja) itself occupies only 250 sq km. FCT is bounded on the north by Kaduna State, on the west by Niger State, on the east and southeast by Plateau and Nassarawa states, and on the southwest by Kogi State. It falls within latitude 7° 25'N and 9° 20' North of the Equator and longitude 6° 45' and 7° 39' (Abubakar *et al.*, 2000).

The main ethnic group in FCT is the Gbagyi. Other groups are Bassa, Gade, Gwandara, Koro and Ganagana. The indigenes of Abuja are chiefly subsistence farmers. Fishing activities are common among the Bassa people and among villagers along rivers Usama, Jabi and Gurara. Besides farming, wood and craftwork are notable occupation of the Gbagyis. The Ganaganas are renowned in ironwork. The women commonly practice cloth weaving. Majority of the inhabitants are either Christians or Muslims, though traditional religious worshippers still remain in the territory (Federal Capital Territory Administration, 2010).

The FCT is made up of 6 Area Councils (A/Cs) namely Abaji, Abuja Municipal, Bwari, Gwagwalada, Kuje and Kwali Area Councils. According to the 2006 national population census, FCT has a population of 1,405,201 as shown in table 3.1.

Table 3.1: FCT POPULATION OF AREA COUNCILS

	Male	Female	Total
Abaji	28,652	29,792	58,444
Abuja Municipal	422,133	356,434	778,567
Bwari	116,266	110,950	227,216
Gwagwalada	80,792	76,978	157,770
Kuje	48,918	48,449	97,367
Kwali	43,728	42,109	85,837
Total	740,489	664,712	1,405,201

(Census, 2006)

Each area council had 10 Political Wards except Abuja Municipal Area Council that had 12 Wards. Each political ward is the operational unit for the PHC programs implementation.

Table 3.2: Number and type of Facility by wards in A/Cs of FCT, August 2008.

ABAJI		AMAC		BWARI		G/LADA		KUJE		KWALI	
Population 58,444		Population 778,567		Population 227,216		Population 157,770		Population 97,367		Population 85,837	
WARD	NO/ TYPE OF HF	WARD	NO/ TYPE OF HF	WARD	NO/ TYPE OF HF	WARD	NO/ TYPE OF HF	WARD	NO/ TYPE OF HF	WARD	NO/ TYPE OF HF
Agyana Pandagi	CHC-1 HC - 2	Karshi	HC-1 HP-1	Bwari	HC-2 HP-3	Central	CHC-1 HC - 1	Kuje Central	CHC-1 HC-1	Kwali Central	PHC-1
AluMama gi	HC - 2	Orozo	CHC-1 HC - 2	Ushafa	HC-1 HP-2	Kutunku	CHC-1 HC - 1	Gaube	CHC-1 PHC-1 HC-7	Pai	CHC-1 HC - 3
Ebagi/Rim ba	CHC-1 HC - 1	Karu	PHC-1 HC - 1	Igu	HP-4	Paikon- Kore	HC - 2	Kujekwa	PHC-1 HC- 2	Kilankwa	HC -5
Gawu	CHC-1 HC -2	Kabusa	HC-6	Byazhin	HC-1 HP-2	Gwako	HC-3	Rubochi	PHC-1 HC-3	Yangoji	HC-3
Gurdi	CHC-1	Gui	HC-3	Dutse	PHC-1 HC-2	T / Maje	PHC-1 HC - 1	Gwargwa da	PHC-1 HC-1	Dafa	HC-1
N / East	PHC-1	Jiwa	HC-3	Kawu	CHC-1 HC-1 HP-2	IKWA	HC-2	Yenche	HC-1	Kundu	HC-3
Nuku/Sab ongari	PHC -1 HC-3	Gwagwa	PHC-1 HC-1	Kubwa	CHC-1 HC-2	Quarters	0	Chibiri	HC - 4	Yebu	PHC-1 HC-5
Yaba	CHC-1 HC- 2	Garki	HC-3	Shere	HC-1 HP-3	Dobi	PHC-1 HC- 6	Kwaku	PHC-1 HC-3	Wako	HC-7
Central	CHC-1	Gwarinpa	HC-1 HP-1	Kuduru	0	IBWA	PHC-1 HC-4	Gudun Karya	HC-4	Ashara	PHC-1 HC-2 HP - 1
SE	-	Wuse	-	Usman	0	Zuba	PHC-1	Kabi	HC- 7	Gumbo	HC-3
-	-	Nyanya	-	-	-	-	-	-	-	-	-
-	-	City Centre	-	-	-	-	-	-	-	-	-

(Adapted from Area Councils Services Secretariat, PHC Department-Abuja. April, 2008)

3.2 Study population: The study population was primary health care personnel in all the primary health facilities in the six area councils of FCT.

3.3 Inclusion criteria: All the health personnel from JCHEW and above who had worked for at least 3 months in all the Area Councils PHC health facilities were involved in the study. All the Heads of PHC departments and Heads of four Primary Health Centres in the Area Councils were interviewed.

3.4 Exclusion criteria: Health personnel that had not worked for at least three months, Support Staff and non-Area Council workers.

3.5 Study design:

The study design for the study was descriptive cross-sectional design aimed at obtaining data on available health personnel in Primary Health Care facilities in Federal Capital Territory.

3.6 Sample size determination:

Sample size formula for descriptive study was used to calculate the sample size

$$\text{i.e. } n = \frac{z^2 p q}{d^2} \text{ (Cochran, 1963), (Dahiru } et al, 2006)$$

Where n = the desired sample size for primary health care personnel.

z = standard normal deviate which corresponds to 95% confidence level

p = proportion of outcome of interest

q = 1-p

d = degree of accuracy desired usually taken as 5%

p = 50% assumed because no similar study was found in literature that could be quoted.

Formula application:

$$\begin{aligned} & \frac{(1.96)^2 * 0.5 * 0.5}{(0.05)^2} \\ & = 384.16 + 10\% \text{ allowance for non-respondents} \\ & = 422.576 \text{ approximated to } 430 \\ \text{i.e. } n & = 430 \end{aligned}$$

3.7 Sampling Method:

The sampling method used was Total Sampling of health personnel in PHC facilities in FCT. The choice of total sampling method for the study was informed by the calculated minimum sample size of Primary Health Care personnel which was about 430 while the total number of available health personnel in the six Area Councils prior to the actual study was only 336 and since this number was smaller than the calculated sample size it became clear that total sampling would be used. However, more personnel were already recruited before the field work began. The study was therefore carried out among all the 809 health personnel available in 180 primary health facilities in FCT. Simple random sampling was used to select four Primary Health Centres in FCT for observation of staff absenteeism/attendance at work, and types of primary health care provided.

3.8 Procedure:

A letter of introduction requesting for needed assistance to carry out the study was obtained from the Department of Community Medicine of the College of Medicine, University of Ibadan to the Federal Capital Ethical Review Committee.

Approval was given by the Federal Capital Territory Health Research Ethics Committee, Abuja. Permission was sought and obtained from the heads of health department of the six area councils through their chairmen to carry out the study in their domain. The purpose of the study and the implications were explained to the respondents after which their consent was obtained by willingly appending their signatures. Administration of questionnaires was done over a period of 3 months between June and September 2009. The questionnaires distribution was from one health facility to the other in two Area Councils, in one Area Council the respondents came to the health department for workshop and the opportunity was used to distribute the questionnaire to them and sent to others who were not at the workshop. The assistance of the Medical Officer of Health and the CHO in charge of monitoring and evaluation was sought for the distribution of questionnaires to other respondents in difficult to reach areas. The administration of the questionnaires was carried out daily from Monday to Friday in the area councils. In-Depth Interviews (IDI) were conducted with all heads of the six PHC departments and heads of four randomly

selected PHC centres. Each of the four randomly selected PHC centres was also visited for five consecutive days to record attendance/absentees using a register review checklist. All the health personnel that came to work were each observed for time in and time out.

3.9 Study instruments:

Data were collected using: -

1. Questionnaire (Appendix 1)

Self administered structured questionnaires to obtain information from the health care providers were distributed to them after the purpose of the study and the need to answer the questions objectively was explained to them. Some of the workers who found difficulty in answering the questionnaire were assisted by explaining to them what was expected of them. Questionnaires were administered in English Language and pre-tested in Suleja Local Government Area of Niger state to see if the questions were logically presented and to check for any ambiguities in the questionnaires for necessary corrections before administration to the respondents. Four research assistants were trained (for two days) to supervise the distribution and filling of questionnaires along with the researcher for effectiveness and were involved in the pretest before the actual field work.

To achieve the specific objectives of the study, the questionnaire was divided into 4 sections viz:

Section A: Socio-demographic and occupational characteristics of the health workers.

Section B: Availability of health workers as manifested by

(i) Staff Population Ratios (SPR)

Staff/population ratios are widely used as indicators of the number of staff available to meet the health needs of a given population. Staff/population ratios were calculated using the following formula:

$$\text{Staff Population Ratio} = \frac{\text{Number of Staff}}{\text{Total Population}} \times 100,000$$

Population data were obtained from the 2006 national population census and the number of available PHC staff from the area council's 2009 staff nominal roll

(ii) Absenteeism at work/Attendance at work

Absenteeism rate was calculated with the formula:

Absenteeism rate = $\frac{\text{Number of man days lost}}{\text{Number of man days scheduled to work}} \times 100$

Number of man days scheduled to work (Priyadarshini, 2009)

Section C: Workers perceptions of their availability and factors affecting their Availability

Section D: Types of primary health care facilities and services provided.

2. An Interview Guide (Appendix 2) was constructed and in-depth interviews were conducted on the officers in charge of the Area Councils health department and four randomly selected primary health centres.

3. An observation Check List (Appendix 3) was used to directly observe staff attendance/absenteeism at work, from when they arrived the health facility to when they left and types of health care services provided.

3.10 Ethical consideration:

Ethical approval to carry out the study was obtained from the Federal Capital Territory Health Research Ethics Committee, Abuja.

3.10.1 Data confidentiality:

Serial numbers were used on the questionnaires instead of names to maintain confidentiality of information provided by the respondents. The filled questionnaires were kept in a safe place and were only accessible to members of the research team.

3.10.2 Informed consent:

The purpose of the study, its implication and the need to be objective in their response were carefully explained to the respondents. After this, their consent to participate in the study was sought and obtained before they filled the questionnaires by means of appending their signature on the questionnaires; and were told they can discontinue participation in the study at any point if they so wish.

3.11 Data management and analysis:

Questionnaires were inspected as soon as they were filled and returned by the research assistant and the researcher for early error detection (except in situation where the questionnaires were returned to the Area Councils Secretariat by the respondents).

Data were entered, cleaned and analyzed using the Statistical Package for Social Sciences (SPSS 15.0). Frequencies, proportions, means and standard deviation were generated with appropriate diagrams. Tests of association between categorical variables were also done using chi-square test for categorical variables. A P-value of less than or equal to 0.05 was considered statistically significant.

3.12 Limitations:

About a fifth of the health workers (21.6%) were either on leave or could not be reached because of bad roads due to rainfall, while some of them actually refused to fill the questionnaires because there was no monetary attachment. Effort was made to locate the houses of those on leave but was unsuccessful. However, questionnaires were sent to them through their colleagues and those in hard to reach facilities through the staffs of neighboring facilities.

3.13 Dissemination of knowledge:

Findings from this study will form part of the requirements for the award of Master of Public Health Degree of the University of Ibadan. Findings will be published in peer-reviewed journal of repute.

Feedback of the findings will be made to the Federal Capital Territory Health Research Ethics Committee (FHREC) and the Area Councils secretariat to influence health manpower policy formulation.

CHAPTER FOUR

RESULTS

The presentation of the results is divided into 4 sections according to the objectives of the study i.e. Sections A, B, C, and D. The In-Depth Interview and Observation results are also presented separately.

SECTION A: - Documentation of the Numbers, Categories, Qualifications, and Experience of the Primary Health Care Personnel (Socio-Demographic and Occupational Data).

4.1: Characteristics of PHC personnel

Tables 4.1 below describe the personal characteristics of the respondents. The response rate was 79.4%. The mean age of the respondents was 33 ± 7.4 years with a range of 19 – 58 years. There were varieties of ethnic group among the respondents with Gbagyi predominating and accounting for slightly less than a quarter (22.6%) of them. The other groups included the Hausa who were almost a fifth and the Igbo and the Yoruba who were each about one-tenth of the total respondents (10.8% and 10.0% respectively). Slightly more than half of them were females (58.6%); Majority of them were Christians (63.3%) while slightly over one-third (36.5%) were of Islamic faith. A large proportion of them (72.1%) were married and less than one-third (26.7%) were never married. Only about 41.0% of the respondents were indigenous to the community in which they were working.

The commonest single local language spoken by the respondents was Hausa (35.6%). Less than a fifth (18.2%) spoke more than one local language and less than one-third (27.8%) of them did not speak any of the local languages. A large proportion of them (89.4%) had

some form of post secondary education. Only a small proportion (3.9%) had University Degree, 6.7% had Higher Diploma, a little less than two-thirds (63.5%) had National Diploma while slightly over a quarter (25.9%) had post-secondary certificate. Majority of the respondents (72.9%) qualified from year 2000 - 2009, slightly over one fifth (22.5%) qualified from year 1990 - 1999 and a small proportion (4.7%) qualified from year 1980 – 1989.

Respondents had on the average 8.14 ± 6.7 years of experience with one median year of work in the present health facility ranging from 3months to 30years. The 25th-75th percentiles were 0.58 and 5.00. Slightly over one-third (38.1%) and (36.3%) of the respondents lived within the Communities where the facilities were located and within the area council respectively while a small proportion (5.8%) lived within health facility premises. Only a few (10%) of the respondents did work outside what they were trained for. The commonest other work they did were drug sales/dispensing by CHEWs and JCHEWs (20%), patients' consultation 15%, immunization activities 15% and ad-hoc assignments 10%.

TABLE 4.1: SOCIO-DEMOGRAPHIC AND OCCUPATIONAL CHARACTERISTICS**(n=642)**

Characteristics	Number	Percentage (%)
Age group (years) n=601		
< 20	1	0.2
20-29	220	36.6
30-39	257	42.8
40-49	102	17.0
≥50	21	3.5
Sex		
Male	266	41.4
Female	376	58.6
Ethnicity (n=641)		
Gbagyi	145	22.6
Hausa	122	19.0
Igbo	69	10.8
Yoruba	64	10.0
Other	241	37.6
Religion (n=641)		
Christianity	406	63.3
Islam	234	36.5
Traditional	1	0.2

TABLE 4.1 continued

Characteristics	Number	Percentage (%)
Marital Status (n=641)		
Never Married	171	26.7
Married	462	72.1
Separated	3	0.5
Divorced	1	0.2
Widowed	4	0.6
Community Status (n=639)		
Indigene	262	41.0
Non-indigene	377	59.0
Local Languages spoken (n=637)		
Hausa	227	35.6
Gbagyi	99	15.5
>1 local Language	116	18.2
None	177	27.8
Others	18	2.9
Highest Education Level (n=641)		
Post secondary	573	89.4
Tertiary	59	9.2
Others	9	1.4
Professional Qualifications (n=586)		
Certificate	152	25.9
Diploma	372	63.5
Higher Diploma	39	6.7
Degree	23	3.9
Date of Professional Qualification (n=472)		
1980-1989	22	4.7
1990-1999	106	22.5
2000-2009	344	72.9

TABLE 4.1 Continued

Characteristics	Number	Percentage
Years of Experience(n=618)		
<1year	17	2.8
1 – 5years	254	41.1
6 – 10years	192	31.0
11 – 15years	61	9.9
16 - 20years	57	9.2
>21years	37	6.0
Mean (SD) : 8.14 ± 6.7		
Working Years in Present Health Facility(n=628)		
<1year	258	41.1
1 – 5years	234	37.2
6-10years	64	10.2
11 – 15	29	4.7
16 – 20	28	4.4
>21	15	2.4
Median (25-75 percentile): 1 (0.58-5.0)		
Closeness of Respondents Residence to Health Facility(n=636)		
Within Health Facility Premises	37	5.8
Within the Community where Facility is located	242	38.1
Within the Area Council	231	36.3
Outside the Area Council	126	19.8
Any other work outside what you are trained to do? (n=640)		
Yes	64	10.0
No	576	90.0

Type of other Work (n=20)		
Patient consultation	3	15.0
Immunization	3	15.0
HIV/ AIDS counseling and testing	1	5.0
Nursing of patients	1	5.0
DOTS treatment	1	5.0
ECG work	1	5.0
Community mobilization	1	5.0
Drug sales/dispensing	4	20.0
Administration, managerial work	1	5.0
Medical recording	1	5.0
Store keeping	1	5.0
Ad-hoc assignments	2	10.0

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4.2: Personal Characteristics of Respondents

Table 4.2 below describes the personal characteristics of respondents. Forty one percent of respondents were indigenous to the communities in which they were working with percentage indigene ranging from 0% for medical officers, midwives and pharmacy technicians and 75%, 60.4% and 60.0% for EHOs, JCHEWs and laboratory scientists respectively.

Majority of health staff were women except medical officers (44.4%), pharmacy technicians (0.0%) and EHOs (25%). Respondents had on the average, 8 years of experience in the PHC facilities with midwives having relatively less years of experience with an average of 3 years of experience. Average years of work in current PHC was 4 years with pharmacy technicians having the least average year of work in current health facility with an average of 0.4 year. CHOs and EHOs had on the average about 14 years and 13 years in the current PHC. A large majority (99.2%) of the respondents completed at least OND/HND/Degree.

TABLE 4.2: Personal Characteristics of Respondents

Designation	Age			Male %	Female %	*Education %	Indigene %	Non Indigene %	Yrs of exp		Yrs in PHC	
	N	Mean	S.D.						Mean	S.D.	Mean	S.D.
All Respondents	642	33.27	7.366	41.4	58.6	99.2	41.0	59.0	8.136	6.657	4.1512	9.536
Medical Officer	9	33.50	5.606	55.6	44.4	100	0.0	100	5.75	3.1053	1.824	3.1071
CHO	32	40.89	8.774	40.6	59.4	100	37.5	62.5	16.4	7.4538	13.9145	35.333
Nurse/midwife	53	37.08	4.991	3.8	96.2	100	15.1	84.9	12.375	7.6849	3.9954	5.773
Nurse	37	31.71	7.098	35.1	64.9	100	32.4	67.6	7.625	6.5295	2.0878	4.3166
Midwife	30	27.27	4.719	3.3	96.7	100	0.0	100	2.825	3.0037	1.1470	1.019
Snr. CHEW	257	34.02	7.233	48.6	51.4	100	42.5	57.5	9.1437	6.268	4.6005	5.8167
Jnr. CHEW	149	30.21	5.922	45.0	55.0	100	60.4	39.6	5.0256	4.390	2.4339	3.5189
Lab Technician	16	31.36	6.675	50.0	50.0	100	50.0	50.0	6.5333	6.046	3.2288	3.682
Lab Scientist	5	40.20	3.271	80.0	20.0	100	60.0	40.0	12.40	2.881	8.300	7.4297
Pharm. Techn.	3	41.50	2.121	100.0	0.0	100	0.0	100.0	16.50	2.1213	.4150	.23335
EHO	4	44.50	13.868	75.0	25.0	100	75.0	25.0	13.0	7.5277	12.7075	14.338
Med Recorder	11	31.70	5.334	54.5	45.5	81.8	45.5	54.5	3.399	3.798	4.4836	6.551
Others	34	33.03	7.439	45.5	54.5	54.5	36.4	63.6	5.927	6.3585	3.919	5.59

*Education: Completed at least OND/HND/Degree

4.3: Distribution of Respondents' by Area Councils in FCT

Table 4.3 revealed the number of respondents by designation by area councils and their proportion within the area councils. Each area council headquarters had health department headed by one MOH but were not respondents to the questionnaire. It showed that senior community health extension workers constitute the largest group of workers (40.2%) in FCT. The distribution of the respondents by designation as seen in Fig 4.1 also showed that majority of health workers in the Federal Capital Territory were SCHEWs and JCHEWs.

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Table 4.3: Distribution of Respondents by proportions within Area Councils (n=639)

Designation	ABAJI		AMAC		BAC		G/LADA		KUJE		KWALI		FCT	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Medical Officer	1	1.1	3	2.2	1	.7	0	0	2	2.3	2	2.0	9	1.4
CHO	1	1.1	7	5.0	5	3.5	7	8.6	5	5.7	7	6.9	32	5.0
Nurse/midwife	10	11.1	12	8.6	18	12.8	7	8.6	2	2.3	4	4.0	53	8.3
Nurse	13	14.4	8	5.8	6	4.3	3	3.7	1	1.1	6	5.9	37	5.8
Midwife	6	6.7	7	5.0	11	7.8	1	1.2	2	2.3	3	3.0	30	4.7
Snr CHEW	44	48.9	58	41.7	51	36.2	30	37	40	46.0	34	33.7	257	40.2
Jnr CHEW	10	11.1	33	23.7	37	26.2	29	35.8	14	16.1	26	25.7	149	23.3
Lab Techn.	0	0	6	4.3	2	1.4	0	0	1	1.1	7	6.9	16	2.5
Lab Scientist	1	1.1	2	1.4	0	0	1	1.2	0	0	1	1.0	5	0.8
Pharm Techn.	0	0	0	0	3	2.1	0	0	0	0	0	0	3	0.5
EHO	0	0	0	0	0	0	0	0	3	3.4	1	1.0	4	0.6
Med Recorder	0	0	1	.7	5	3.5	1	1.2	0	0	4	4.0	11	1.7
Others	4	4.4	2	1.4	2	1.4	2	2.5	17	19.5	6	5.9	34	5.2
Total	90	14.1	139	21.8	141	22.1	81	12.7	87	13.6	101	15.8	639	100

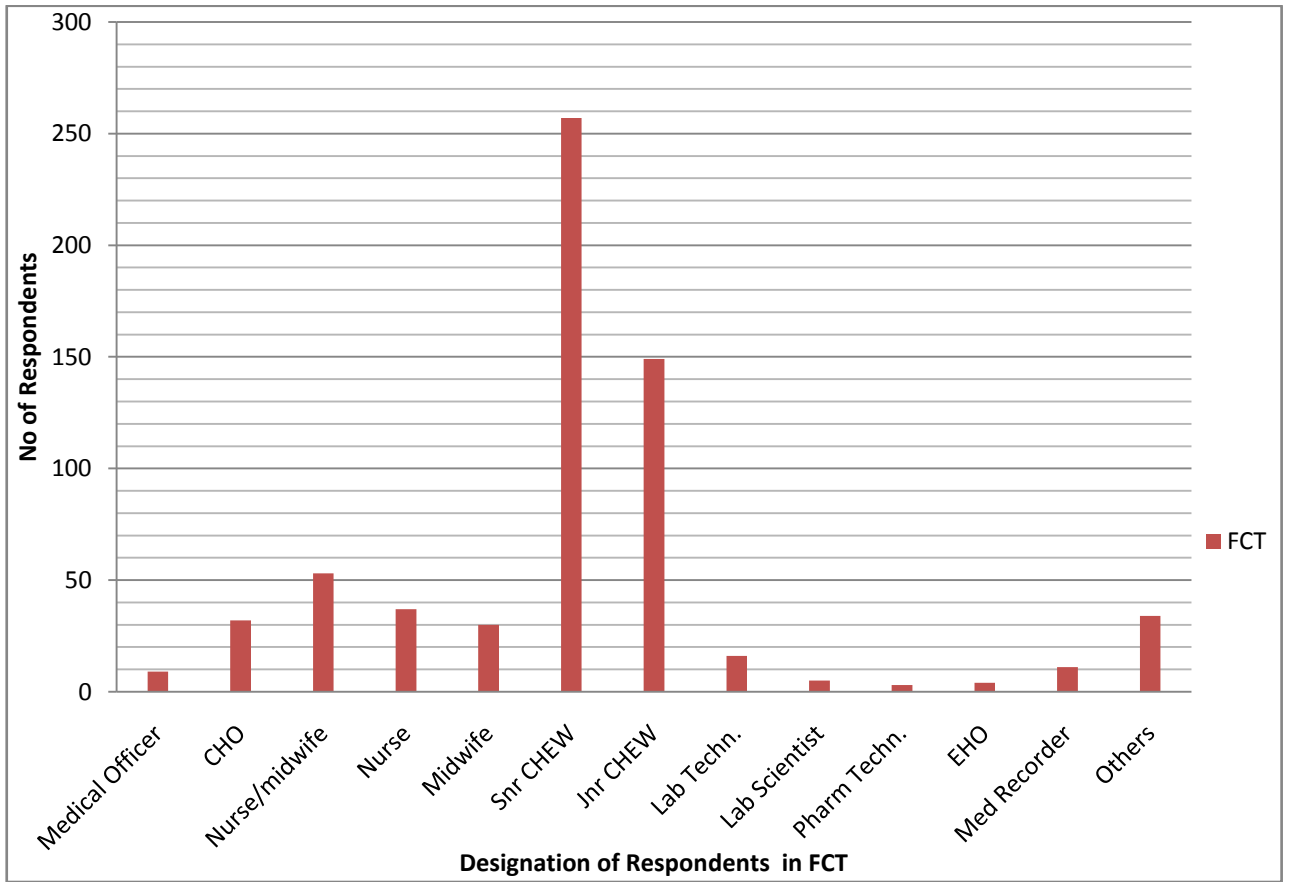


Figure 4.1: Distribution of Respondents in FCT

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4.4: Distribution of Respondents by Health Facility Type

Table 4.4 shows the number of respondents by facility types and their proportion within the specific designation in FCT e.g. a large number of medical officers that responded (62.5%) worked in the primary health centres. Majority of the nurse/midwives, nurses, midwives, Snr. CHEWs, Jnr. CHEWs, Lab. Technicians, pharmacy technicians and EHOs (65.4%, 43.2%, 40.0%, 52.6%, 61.2%, 66.7%, 60.0%, 66.7% and 100% respectively) worked in primary health centres. All categories of staff were found in Primary Health Centres as compared to the other health facilities in FCT.

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Table 4.4: Distribution of Respondents and Proportions by Designation within Health Facility Type in FCT (n=625)

DESIGNATION	CHC		PHC		PHC Clinic		Health Post		TOTAL	
	N	%	N	%	N	%	N	%	N	%
Medical Officer	3	33.3	5	55.6	1	11.1	0	0	9	100
CHO	4	14.3	12	42.9	12	42.9	0	0	28	100
Nurse/midwife	11	21.2	34	65.4	7	13.5	0	0	52	100
Nurse	11	29.7	16	43.2	8	21.6	2	5.4	37	100
Midwife	11	36.7	12	40.0	6	20.0	1	3.3	30	100
Snr CHEW	39	15.4	133	52.6	70	27.7	11	4.3	253	100
Jnr CHEW	12	8.2	90	61.2	42	28.6	3	2.0	147	100
Lab Technician	3	20.0	10	66.7	2	13.3	0	0	15	100
Lab Scientist	2	40.0	3	60.0	0	0	0	0	5	100
Pharm Techn.	0	0	2	66.7	1	33.3	0	0	3	100
EHO	0	0	2	100.0	0	0	0	0	2	100
Med Recorder	6	54.5	4	36.4	1	9.1	0	0	11	100
Others	12	36.4	20	60.6	1	3.0	0	0	33	100
Total	114	18.2	343	54.9	151	24.0	17	2.7	625	100

SECTION B: AVAILABILITY OF HEALTH PERSONNEL IN THE FCT

In this section, only the categories of staff operating at the facility level were taken into consideration. Other staffs such as medical officer of health, M & E officers and head of units at the health departments of the area councils were considered as administrators. It should be noted however that each health department of the area councils had a medical officer of health.

4.5: Distribution of PHC Personnel Designation by Area Council in FCT, August 2009

Table 4.5 shows that most of the PHC facilities were staffed by community health workers (CHO, CHEWs, JCHEWs), and Nurse/Midwives. The data shown below were collected from area councils on these ten categories of staff.

Table 4.5: Distribution of PHC Personnel Designation by Area Council in FCT, August 2009

Area council	Medical officers	CHO	Nurse	SCHEW	JCHEW	N/Mw	MRO	Pharm Techn	Lab. Techn	M/W
ABAJI	1	1	2	89	19	2	0	0	0	1
AMAC	3	10	11	77	39	18	1	3	5	2
BAC	3	8	9	54	44	21	0	4	9	5
G/Lada	3	9	5	60	30	16	1	1	1	6
KUJE	2	14	4	109	72	18	0	3	8	6
KWALI	2	3	4	64	46	6	10	2	5	6
Total	14	45	35	453	250	81	12	13	28	26

4.6: Distribution of Primary Health Care Personnel Groups

Categories of health personnel in the FCT are presented in Table 4.6 as: Nurses and midwives: includes Nurses, Midwives, and Nurse-Midwives; Laboratory staff: includes Laboratory Scientists and Laboratory technicians; Pharmaceutical Staff: includes pharmacists and pharmacy technicians; Community health officers and community health extension workers (CHEWs) include SCHEWs and JCHEWs.

Table 4.6: Distribution of Primary Health Care Personnel Groups in FCT

Area council	Medical officers	CHO	CHEWs	Nurses/Mw	MRO	Pharm Staff	Lab. T./LSc.
	Avail.	Avail.	Avail.	Avail.	Avail.	Avail.	Avail.
ABAJI	1	1	108	5	0	0	0
AMAC	3	10	116	32	1	3	11
BAC	3	8	98	35	0	5	13
G/LADA	3	9	90	27	1	2	5
KUJE	2	14	181	28	0	3	8
KWALI	2	3	110	16	10	2	9
Total	14	45	703	143	12	15	46
SPR/100,000	1	3.2	50	10.2	0.85	1.1	3.3
Average	0.4	1.4	3.9	4.5	0.4	0.5	1.4
% available	43.8	140.6	66.9	89.4	37.5		
% of Total staff	1.5	4.7	73.5	14.9	1.3	1.6	4.8

Note: SPR is Staff Population Ratio

% available was calculated from $\frac{\text{Available staff}}{\text{Expected staff}} \times 100$

% of Total staff was calculated from $\frac{\text{Total no of PHC Personnel in a particular group}}{\text{Total no of staff in FCT}}$

4.7: Summary Status of PHC Personnel in 6 Area Councils of the FCT.

Table 4.7 shows Expected number of personnel calculated using recommended national standards. It also shows that the area councils were understaffed except for CHEWs, CHOs but mal-distributed across the area councils.

TABLE 4.7: Summary Status of PHC Personnel in 6 Area Councils of the FCT.

Area council	Medical officers		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw	
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.	
ABAJI	8	1	8	1	8	2	48	89	96	19	32	2	8	0	8	0	8	0	1	
AMAC	3	3	3	10	3	11	51	77	98	39	12	18	3	1	3	3	3	5	2	
BAC	4	3	4	8	4	9	32	54	80	44	16	21	4	0	4	4	4	9	5	
G/LADA	6	3	6	9	6	5	58	60	116	30	24	16	6	1	6	1	6	1	6	
KUJE	7	2	7	14	7	4	83	109	166	72	28	18	7	0	6	3	6	8	6	
KWALI	2	2	4	3	4	4	74	64	149	46	16	6	4	10	4	2	4	5	6	
Total	32	14	32	45	32	35	346	453	705	250	128	81	32	12	31	13	31	28	26	
% Available	43.8%		140.6%		109.4%		130.9%		35.5%		63.3%		37.5%		41.9%					
SPR (expected)	2.3/100,000		2.3/100,000		2.3/100,000		24.6/100,000		50.2/100,000		9.1/100,000		2.3/100,000		2.2/100,000		2.2/100,000			
SPR (available)	.996/100,000		3.2/100,000		2.5/100,000		32.2/100,000		17.8/100,000		5.8/100,000		.85/100,000		.93/100,000		2.0/100,000			

4.8: PHC Staff Category, Number Expected/Available, %Available and %Shortage in FCT.

Table 4.8 shows areas of shortage such as medical officers, JCHEWs, nurse/midwives, MROs, pharmacy technicians and laboratory technicians. It also shows areas of surplus in CHOs, nurses and senior CHEWs. There were no public health nurses in FCT.

Table 4.8: PHC Staff Category, Number Expected/Available, %Available and %Shortage in FCT.

Staff Category	Expected	Available	%Available	%Shortage
Medical Officer	32	14	43.8	56.2
CHO	32	45	140.6	-
Nurses	32	35	109.4	-
SCHEWs	346	453	130.9	-
JCHEWs	705	250	35.5	64.5
N/Mw	128	81	63.3	36.7
MRO	32	12	37.5	62.5
Pharm. Technician	31	14	41.9	58.1
Lab. Technician	31	28	90.3	0.7

4.9: Proportion of available personnel by category by area council in FCT

Table 4.9 reveals PHC personnel shortage, adequate and surplus areas as well as uneven distribution of staff in urban AMAC where all other categories of staff are adequate or more than adequate except for JCHEWs and MROs. Largely semi urban BAC and G/lada had shortages in Medical Officers, JCHEWs, and MROs while largely rural Kwali, Kuje and Abaji area councils show more areas of shortages.

TABLE 4.9: Proportion of available personnel by category by area council in FCT

	Largely urban	Largely semi-urban		Largely rural		
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Personnel	Available (%)					
Med. Officer	100.0	75.0	50.0	50.0	28.6	12.5
CHO	333.3	200.0	150.0	75.0	200.0	12.5
CHEW	151.0	168.8	103.5	86.5	131.3	185.4
JCHEW	39.8	55.0	25.9	31.5	43.4	19.8
Nurse	366.7	225.0	83.3	100.0	57.1	25.0
N/MW	150.0	137.5	66.7	37.5	64.3	6.25
MRO	33.3	0.0	16.7	250.0	0.0	0.0
PTechn	100.0	100.0	16.7	50.0	50.0	0.0
Lab.Techn	166.7	225.0	16.7	125.0	233.3	0.0

4.10: Staff Absenteeism, Factors for Absenteeism and Effect of Staff Absenteeism on Patient's Care

Table 4.10 reveals that, majority (90.1%) of the respondents perceived rare staff absenteeism while 7.3% and 2.6% reported staff absenteeism was often and very often respectively. Absenteeism was commonly caused by Sickness (95.2%), lack of payment of salary (29.0%), and lack of roads (14.5%).

TABLE 4.10: Staff Absenteeism, Absenteeism Factor and Effect of Staff Absenteeism on Patient's Care

CHARACTERISTICS	Number	Percentage (%)
Staff Absenteeism at work (n=587)		
Rarely	529	90.1
Often	58	9.9
Absenteeism Factor		
Lack of roads	90	14.5
Lack of electricity	42	6.8
Poor toilet facilities	48	7.7
Lack of piped and portable water	58	9.3
Sickness	591	95.2
Lack of payment of salary	180	29.0
Bereavement	6	1.0
Official Duty (workshop, seminar, training)/assignment	14	2.3
Exigencies	7	1.1
Lack of good working environment	1	0.2
Poor communication network	1	0.2
Lack of equipments in the health facility	2	0.3
Perceived Effect of Staff Absenteeism on Patient's Care		
Death of patient	328	52.8
Patients condition becomes worse	411	66.2
Patient will be unhappy	528	85.0
Decrease in patient flow	499	80.4
No effect	44	7.1

SECTION C: WORKERS PERCEPTIONS OF HEALTH WORKERS AVAILABILITY

4.11: Perceived Adequacy of Staff, Factors Responsible for Inadequacy and Respondents' Solution Opinion on PHC Personnel Shortage.

Table 4.11 reveals workers perceptions of health workers availability in the health facilities. A little above two thirds (69.5%) of the respondents were of the opinion that health workers were adequate in their health facilities while about one third (30.5%) were of a contrary opinion. Out of the 184 respondents to factors responsible for inadequate health workers, three quarter (75.3%), less than twenty percent (16.9%) and 5.8% of them were of the opinion that lack of employment, lack of equipments and lack of social amenities in the community respectively are major constraints to staff adequacy. The table also showed that employment of qualified staff (75.1%), Provision of equipments and supplies (16.7%), Fair remuneration (salary wages) (15%), Training and manpower development (11.1%) are the common solution options for staff shortage.

Table 4.11: Perceived Adequacy of Staff, Factors Responsible for Inadequacy and Respondents' Solution Opinion on PHC Personnel Shortage

CHARACTER	Number	Percentage (%)
Perceived Adequacy of Staff (n=636)		
Adequate	442	69.5
Not adequate	194	30.5
Factors responsible for Inadequate Health workers		
Failure to employ qualified staff by Government	116	75.3
Financial constraints of Area council to pay health workers	9	5.8
Lack of equipment	26	16.9
Lack of Basic social amenities in the community	14	9.0
Inequitable distribution of employed workers	5	3.2
Preference for working in urban areas	8	5.2
Difficult terrain/hard to reach places	1	0.6
Lack of recruitment Policy	1	0.6
Untimely payment of salaries and wages	2	1.3
Employment of incapable hands	2	1.3
Respondents' Solution Opinion on PHC Personnel Shortage		
Good leadership	2	0.4
Political will committed to adequate PHC staff employment on the side of government	2	0.4
Allocation of adequate fund for PHC staff recruitment	12	2.5
Employment of qualified staff	365	75.1
Provision of equipments and supplies	81	16.7
Training and manpower development	54	11.1
Fair remuneration (salary & wages)	73	15.0
Infrastructural development	30	6.2
Provision of drugs	22	4.5
Provision of accommodation within the health facility or community	20	4.1

Timely payment of salary	22	4.5
Good working environment	14	2.9
Improvement of staff welfare	21	4.3
Fair and equitable distribution of staff	10	2.1
Acceptance of posting by health workers	1	.2
Supportive supervision	14	2.9
Incentives (transportation, logistics to attend work)	19	3.9

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4.12: Factors Encouraging Availability (Retention) of Existing Staff

Table 4.12 & Fig. 4.2 below show factors thought to be most effective by respondents at making staff available as those relating to opportunity for continuing education (60.3%), availability of materials to do the job (53.3%), doing work one was trained for (51.5%), working equipments and supplies (49.9%), timely payment of salary (48.6%), professional code of conduct (46.3%), team work (41.6%), free hand giving to workers to manage their work (39.9%) clear job description (38.0%), and clean water and light(37.5%). Factors thought to be more effective and effective are helpful supervision, fair salary and wages respectively.

Table 4.12: Factors Encouraging Availability (Retention) of Existing Staff.

Factors	Effective		More Effective		Most Effective	
	N	(%)	N	(%)	N	(%)
Fair Salary and wages (n=593)	239	40.3	124	20.9	230	38.8
Timely payment of salary (n=595)	136	22.9	170	28.6	289	48.6
Clear job description (n=600)	172	28.7	200	33.3	228	38.0
Availability of Materials to do the job (n=617)	127	20.6	161	26.1	329	53.3
Helpful supervision (n=603)	188	31.2	212	35.2	203	33.7
Working equipments and supplies (n=609)	127	20.9	178	29.2	304	49.9
Opportunity for continuing education (n=607)	102	16.8	139	22.9	366	60.3
Team work (n=606)	171	28.2	183	30.2	252	41.6
Clean water and light (n=595)	207	34.8	165	27.7	223	37.5
Doing work you are trained for (n=604)	126	20.9	167	27.6	311	51.5
Free hand giving to you to manage your work(n=591)	182	30.8	173	29.3	236	39.9
Professional code of conduct (n=592)	144	24.3	174	29.4	274	46.3

SECTION D: TYPES OF PRIMARY HEALTH CARE FACILITIES AND SERVICES PROVIDED.

4.13: Types of Primary Health Care Facilities and Services Provided.

In table 4.13 the number of respondents working in Comprehensive Health Centre, Primary Health Centre, Primary Health Clinic and Health Post are 18.3%, 55.1%, 23.9% and 2.7% respectively. Majority of the health facilities carry out PHC health services minimum package except mental health and care of the elderly. Five hundred and ninety six (93%) gave appointment to their patients. More than half (66.9%) of them gave appointment for follow up on effectiveness of treatment on patients, 15.2%, 7.3% and 3.6% gave appointment for continuity of treatment, ante natal follow up and follow up on immunization respectively. The table further revealed that majority (68.3%) of the respondents referred patients to the General Hospital. Oral and mental health was perceived to be given as health education when the need arose, while there was no special service for the elderly in all the health facility types.

Table 4.13: Types of Primary Health Care Facilities and Services Provided.

Characteristics	Number	Percentage (%)
Type of Health Facility (n=627)		
Comprehensive health centre (CHC)	115	18.3
Primary health centre	345	55.1
Health clinic	150	23.9
Health Post	17	2.7
Services Offered by Health Facility		
Health promotion and education	607	95.0
Nutrition education	585	91.5
Ante natal care	621	97.2
In-patient deliveries	446	69.8
Post natal care	528	82.6
Oral rehydration therapy	590	92.3
Family planning services	578	90.5
Immunization against common childhood diseases	626	98.0
Treatment of common diseases/minor injuries	629	98.4
Provision of essential drugs	586	91.7
Oral health care	413	64.6
Mental health care	152	23.8
Adult care	434	67.9
Care of the elderly	276	43.2
Emergency care	404	63.2
Patient's appointment (n=639)		
Workers that give Appointment	596	93.3
Workers that do not give appointment	43	6.7

Reasons for Appointment (n=619)		
I give appointment for continuity of treatment	94	15.2
Follow up for effectiveness of treatment	414	66.9
Ante natal care revisit	45	7.3
Post natal care follow up	2	.3
Follow up of immunization services	22	3.6
Follow up for family Planning	16	2.6
Elective procedure	1	.2
Proper care	15	2.4
To avoid wasting patients time when cases are combined	2	.3
Proper Diagnosis	2	.3
Laboratory results	6	1.0
Referral Services (Type of Health Facility patients are referred to)		
Tertiary Hospital	114	16.2
General Hospital	480	68.3
Comprehensive Health Clinic	88	12.5
Primary Health Centre	17	2.4
Primary Health Care Clinic	4	.6

4.14: Respondents' Outreach and Home Visit Activities

In table 4.14, 609 (95%) of the respondents go out on outreaches while 32 (5%) do not go. Major outreach activities carried out are Immunization outreach (98.0%), Health promotion and education (83.1%), Awareness on environmental sanitation (81.6%), Follow up of Traditional Birth Attendants (55.3%). Less than half (42.9%) went on outreach very often, 43.6% went sometimes while 13.5% rarely go on outreach activities. Majority (88.8%) of them went on home visit while 11.2% did not go. The main purposes for home visit as stated by respondents were failure of mother to bring child for immunization (96.0%) and follow up after discharge from health facility (82.8%).

Table 4.14: Respondents' Outreach and Home Visit Activities

Characteristics	Number	Percentage (%)
Staff outreach activities (n=641)		
Staff who go on outreaches	609	95.0
Staff who do not go on outreaches	32	5.0
Type of Outreaches		
Immunization outreach	596	98.0
Health promotion and education	505	83.1
Awareness on environmental sanitation	496	81.6
Follow up of TBAs	336	55.3
HIV/AIDS awareness	11	1.8
Sex Education	2	0.3
Awareness of existing PHC health facilities within the community	1	0.2
House to House Inspection	4	0.7
Community Dialogue	2	0.3
Community mobilization for immunization	7	1.2
Disease Surveillance	2	0.3
Exclusive Breast Feeding	1	0.2
MDGs outreaches	1	0.2

How often do you go on outreaches? (n=638)		
Very often	274	42.9
Sometimes	278	43.6
Rarely	86	13.5
Staff Home Visit Activities (n=636)		
Staffs who go	565	88.8
Staffs who do not go	71	11.2
How often do you go on Home Visit? (n=639)		
Very often	260	40.7
Sometimes	265	41.5
Rarely	114	17.8
Purpose of Home Visit		
Failure of mother to bring child for immunization	548	96.0
Follow up after discharge from facility	473	82.8
Defaulters on TB DOTS treatment	3	0.5
Child's growth monitoring	1	0.2
Supervision of nutritional food demonstration & nutritional counseling	4	0.7
Failure of patient to turn up for follow up	7	1.2
Ambulatory patients	1	0.2
Post natal care	3	0.5
Ante natal follow up	7	1.2

4.15: Health Facility Type by Area Council in FCT

Figure 4.2 below shows health facility type distribution in FCT. Majority (80.0%) of the health posts in FCT were located in Bwari Area Council, 25.8%, 24.2% of the health clinics are located in Kuje and Kwali Area Councils respectively. 5 (27.8%), 4 (22.2%) of PHCs are located in Kuje and Gwagwalada respectively. 6 (42.9%) of the Comprehensive Health Centres are located in Abaji Area Council.

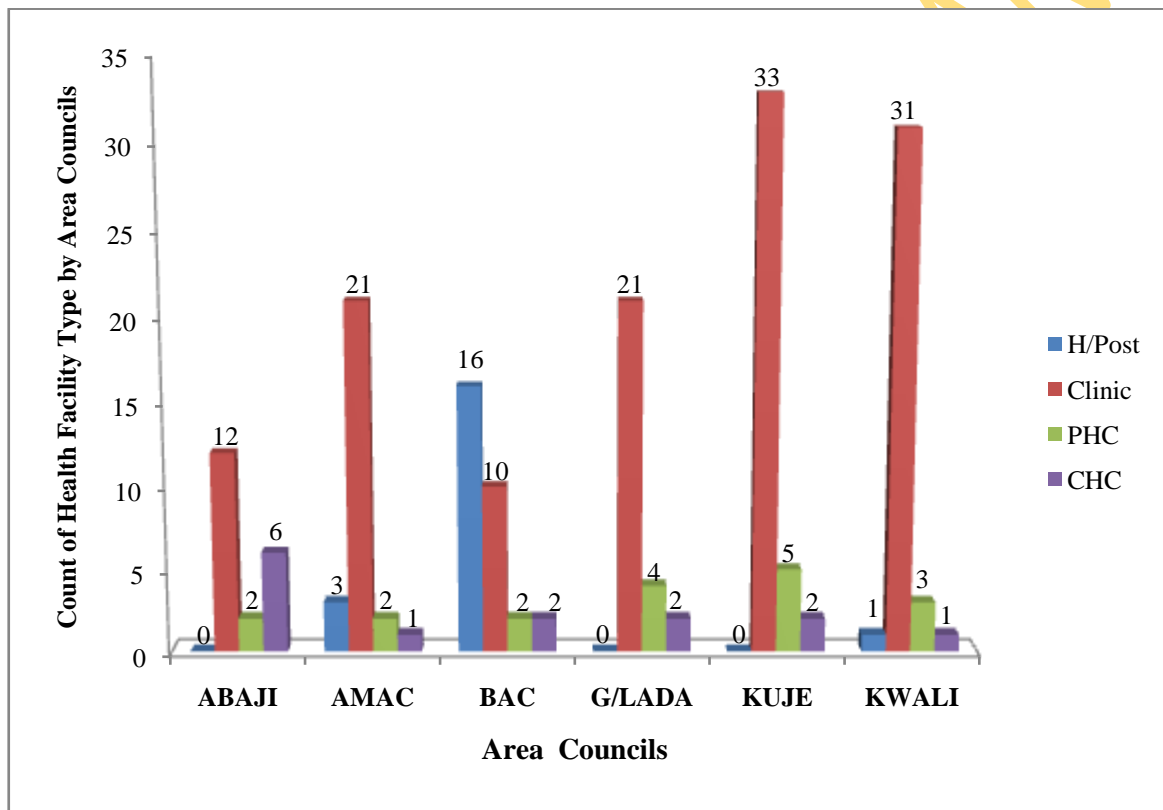


Fig 4.2: Health Facility Type by Area Council in FCT

4.16: Relationship between Perceived Adequacy of Staff and Factors Encouraging Availability of Existing Staff

Table 4.15 is showing a significant association between perceived adequacy of staff and perception that the following factors encourage staff availability – the availability of materials to do work, availability of working equipments and supplies, team work, helpful supervision, doing work trained for, and opportunity for continuing education.

4.17: Relationship between Staff Availability and Services Provided

Table 4.16 shows the analysis conducted to determine the association between Staff availability and types of health services provided in the PHC Health facilities. Staff availability was found to be significantly ($P < 0.05$) associated with health promotion and education, nutrition education, oral rehydration therapy and treatment of common diseases/minor injuries provisioning.

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Table 4.15: Relationship between Perceived Adequacy of Staff and Factors Encouraging Availability of Existing Staff.

Factors	Perceived Staff adequacy		Total	X ²	P-value	df
	Yes	No				
Availability of material						
Effective	101(16.5)	25 (4.1)	126 (20.6)	14.9	.001*	2
More effective	95(15.5)	66(10.8)	161 (26.3)			
Most effective	226(36.9)	99 (16.2)	325 (53.1)			
Helpful supervision						
Effective	146 (24.4)	42 (7.0)	188 (31.4)	10.0	.007*	2
More effective	134 (22.4)	76 (12.7)	210 (35.1)			
Most effective	133 (22.2)	68 (11.4)	201 (33.6)			
Working Equipments						
Effective	100 (16.5)	26 (4.3)	126 (20.8)	9.2	.010*	2
More effective	112 (18.5)	65(10.7)	177 (29.3)			
Most effective	205 (33.9)	97(16.0)	302 (49.9)			
Team work						
Effective	138 (22.9)	33(5.5)	171 (28.5)	15.1	.001*	2
More effective	115 (19.1)	65(10.8)	180 (29.9)			
Most effective	163 (27.1)	88(14.6)	251 (41.7)			
Doing work trained for						
Effective	100 (16.7)	26 (4.3)	126 (21.0)	7.9	.019*	2
More effective	109 (18.2)	58 (9.7)	167 (27.8)			
Most effective	206 (34.3)	101 (16.8)	307 (51.2)			
Opportunity for continuing education						
Effective	83 (13.8)	19 (3.2)	102 (16.9)	11.3	.004*	2
More effective	99 (16.4)	39 (6.3)	138 (22.9)			
Most effective	234 (38.8)	129 (21.4)	363 (60.2)			
Fair salary and wages						
Effective	169 (41.4)	69 (38.1)	238 (40.4)	1.6	.443	2
More effective	88 (21.6)	35 (19.3)	123 (20.9)			
Most effective	151 (37.0)	77 (42.5)	228 (38.7)			
Timely payment of salary						
Effective	102 (25.1)	34 (18.5)	136 (23.0)	4.1	.130	2
More effective	118 (29.0)	51 (27.7)	169 (28.6)			
Most effective	187 (45.9)	99 (53.8)	286 (48.4)			
Clear job description						
Effective	125 (30.4)	46 (24.9)	171 (28.7)	2.7	.257	2
More effective	129 (31.4)	69 (37.3)	198 (33.2)			
Most effective	157 (38.2)	70 (37.8)	227 (38.1)			
Clean water and light						
Effective	146 (24.7)	59 (10.0)	205 (34.7)	1.9	.380	2
More effective	107 (18.1)	58 (9.8)	165 (27.9)			
Most effective	155 (26.2)	66 (11.2)	221 (37.4)			

Some level of autonomy to manage work						
Effective	134 (22.8)	46 (7.8)	180 (30.7)	5.2	.073	2
More effective	108 (18.4)	63 (10.7)	171 (29.1)			
Most effective	163 (27.8)	73 (12.4)	236 (40.2)			
Professional code of conduct						
Effective	104 (17.7)	40 (6.8)	144 (24.5)	2.3	.325	2
More effective	122 (20.7)	51 (8.7)	173 (29.4)			
Most effective	178 (30.3)	93 (15.8)	271 (46.1)			

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Table 4.16: Relationship between Staff Availability and Services Provided

Services Provided	Available	Not available	Total	X ²	P-value
Health promotion and education					
Yes	503 (86.1)	52 (8.9)	555 (95.0)	3.948	.047*
No	23 (3.9)	6 (1.0)	29 (5.0)		
Nutrition education					
Yes	487 (83.5)	48 (8.2)	535 (91.8)	4.774	.029*
No	39 (6.7)	9 (1.5)	48 (8.2)		
Antenatal care					
Yes	516 (88.4)	55 (9.4)	571 (97.8)	2.569	.109
No	10 (1.7)	3 (0.5)	13 (2.2)		
In-patient deliveries					
Yes	368 (63.6)	40 (0.9)	408 (70.5)	.028	.868
No	155 (26.8)	16 (2.8)	171 (29.5)		
Post natal care					
Yes	438 (75.1)	44 (7.5)	482 (82.7)	1.326	.250
No	88 (15.1)	13 (2.2)	101 (17.3)		
Oral rehydration therapy					
Yes	496 (85.1)	45 (7.7)	541 (92.8)	14.338	.000*
No	31 (5.3)	11 (1.9)	42 (7.2)		
Family planning services					
Yes	476 (81.4)	55 (9.4)	531 (90.8)	1.266	.261
No	51 (8.7)	3 (0.5)	54 (9.2)		
Immunization against common childhood diseases					
Yes	518 (88.4)	55 (9.4)	573 (97.8)	2.589	.108
No	10 (1.7)	3 (0.5)	13 (2.2)		
Treatment of common disease/minor injury					
Yes	522 (89.2)	55 (9.4)	577 (98.6)	6.910	.009*
No	5 (0.9)	3 (0.5)	8 (1.4)		
Provision of essential drugs					
Yes	482 (82.5)	53 (9.1)	535 (91.6)	.155	.694
No	45 (7.7)	4 (0.7)	49 (8.4)		
Oral health care					
Yes	340 (58.5)	33 (5.7)	373 (64.2)	1.093	.296
No	184 (31.7)	24 (4.1)	208 (35.8)		
Mental health care					
Yes	119 (20.5)	16 (2.8)	135 (23.2)	.828	.363
No	405 (69.7)	41 (7.1)	446 (76.8)		
Adult care					
Yes	359 (61.9)	39 (6.7)	398 (68.6)	.001	.973
No	164 (28.3)	18 (3.1)	182 (31.4)		
Care of the elderly					
Yes	226 (39.0)	28 (4.8)	254 (43.8)	.729	.393
No	297 (51.2)	29 (5.0)	326 (56.2)		
Emergency care					
Yes	341 (58.7)	37 (6.4)	378 (65.1)	.001	.980
No	183 (31.5)	20 (3.4)	203 (34.9)		

4.18: IN-DEPTH INTERVIEW REPORT

In-Depth Interview was carried out at the headquarters of Abuja Municipal, Bwari, Kuje and Gwagwalada Area Councils.

4.18.1: In-Depth Interview main respondents

The main respondents in Abuja Municipal, Gwagwalada, Kwali, and Abaji Area Councils were the Medical Officer of Health; but the Community Health Officers (Monitoring and evaluation officers) provided the required data. The main respondents in Bwari and Kuje Area Councils were the Monitoring and evaluation officers. At the PHC facility levels, respondents were 2 Chief Nursing Officers, a CHO, and a CHEW.

4.18.2: Facilities opening days per week

Health facilities were opened to the public from Monday to Friday in most of the area councils. In some facilities in Bwari, Kuje and Abaji where they run 24 hours shift such facilities open from Monday to Sunday. However, patients can be attended to even in those facilities that open from Monday to Friday by health workers living within the community if the need arose.

4.18.3: Number of Outpatients and In-Patients in Area Councils

Table 4.17 shows number of patients seen in one month. Patients' attendance in Gwagwalada area council was not concluded because some health facilities (27%) had not Submitted data.

Table 4.17: Number of Outpatients and In-Patients by Area Council

Characteristics	Number
Number of outpatients seen in the last 30days	
Abaji A/C	93
Gwagwalada* A/C	897
Kwali A/C	1359
Kuje A/C	1371
AMAC	2019
Bwari A/C	2701
*Incomplete Data (from 19 facilities out of 26)	
Number of in-patients seen in the last 30days	
Abaji A/C	6
Gwagwalada	54
Bwari A/C	85
Others	None

4.18.4: Services carried out by Area Councils

All the interviewees said their facilities carry out Health promotion and Education, Nutrition Education, Maternal and Child Health, Immunization against common Childhood diseases, Treatment of common diseases/minor injuries. 90% of them said they carry out Family Planning, Provision of essential drug and emergency care.

The interviewees in Kuje and Abaji health departments and Gwagwalada (Zuba PHC) believed the services carried out met the needs of the patients 100% while interviewee in Gwagwalada health department believed services met the needs of patients to a large extent because of lack of equipments and sometimes run out of drugs. All interviewees in AMAC, BAC, and Kwali believed services met the needs of patients to some extent. The reason why AMAC could not meet the need 100% was due to lack of monitoring officers and lack of equipments while BAC and Kwali could not because of community inability to afford cost of care due to rural poverty. Some of these people go to traditional practitioners for their health care.

4.18.5: Personnel Shortage

There were reported shortages of staff in AMAC, Kwali and Kuje while Abaji, Gwagwalada and Bwari reported they had no shortage of staff.

4.18.6: Reasons for not filling Vacant Positions

Sixty seven percent of the Area Councils interviewee said the vacant positions were not filled due to lack of adequate employment (Abuja Municipal, Gwagwalada, Kwali and Abaji).

Table 4.18: Reasons Vacant Positions were not filled

Area Council	Lack of adequate employment	Logistics support	Not Applicable
AMAC	Yes	No	No
BAC	No	No	Yes
Gwagwalada	Yes	No	No
Kwali	Yes	No	No
Kuje	No	Yes	No
Abaji	yes	No	No

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4.18.7: Respondents Reasons why Health Workers Stopped Work in Area Councils' Service

Staff turnover from the area councils' service within the year was low. Majority of Staff that stopped work in Abaji area council were merely transferred to other area councils. The reasons for stopping work from the area council's service by health personnel were given as retirement transfer to other area councils and being sacked for failure to improve self. In Abaji area council, a little above a quarter (27.3%) of those who stopped work retired while about three quarters (72.4%) of them were given transfer to other area councils.

4.18.8: Respondents Reasons for Staff Absenteeism at Work

There was no problem of staff absenteeism in Kuje and Abaji Area Councils. Absenteeism was not also common in Bwari Area Council. However AMAC, Gwagwalada and Kwali Area Council had problem of staff absenteeism to some extent.

The commonest reason for staff absenteeism was sickness as reported by two thirds of the area councils. A third of them reported that follow up on file or collection of drugs and lack of accommodation attached to the health facilities were responsible for staff absenteeism.

4.18.9: Strategy for Minimizing Absenteeism

Supervision and motivation, posting more than one health worker to a health facility and recruitment of health workers indigenous to the community were the strategies employed to minimize absenteeism as shown in table 4.20.

Table 4.19: Reasons for Staff Absenteeism at Work

Area Council	Lack of Basic amenities	Lack of accommodation attached to the health facility	Poor health facility structure	Sickness	Bad road	Lack of commitment	Staff screening	Workshop /Training	Follow up on file or collection of drugs
AMAC	No	No	No	Yes	No	No	No	No	No
BAC	No	Yes	No	Yes	Yes	No	No	No	No
G/lada	No	No	No	Yes	No	Yes	No	No	Yes
Kwali	Yes	Yes	Yes	No	No	No	No	No	No
Kuje	NA	NA	NA	NA	NA	NA	NA	NA	NA
Abaji	NA	NA	NA	Yes	No	No	Yes	No	Yes

Table 4.20: Strategy for Minimizing Absenteeism

	What Specifically do you do to Minimize Absenteeism?			
Area Council	By recruiting health workers indigenous to the community	Supervision and motivation	More than one health worker are posted to a health facility	Nothing
AMAC				Yes
BAC			Yes	
Gwagwalada			Yes	
Kwali	Yes			
Kuje		Yes		
Abaji		Yes		

4.18.10: Dormant facilities in the Area Councils

Kwali and Kuje area councils had dormant facilities Reason for dormant health facilities in Kwali and Kuje Area Council was Poor infrastructure.

4.18.11: Human Resource Policy in use. Kwali, Kuje and Abaji reported they had Human resource policy in use while AMAC, BAC and Gwagwalada reported they had none in use. Those who reported they had no human resource policy usually send proposal of required staff to Area Council management and from here to Area Council services commission.

4.19: OBSERVATION REPORT

Observation checklist was drawn for staff attendance and types of services provided at work in four primary health care facilities.

4.19.1: Staff Attendance at Work

Table 4.21 shows about ninety percent (90.2%) of the PHC workers observed spent less than 6 hours in the PHC while only 9.8% spent 6 hours and above.

Table 4.21: Proportion of personnel who spent less than expected and those who spent expected numbers of hours in observed PHCs

Facility (PHC)	Time spent	
	< 6 hours	6 hours and above
Lugbe	86.7%	13.3%
Dutsen Baupma	100.0%	0.0%
Zuba	87.2%	12.8%
Kuje	88.1%	11.9%
Total	90.2%	9.8%

4.19.2: Time Spent/Lateness to Work

The average time spent by personnel in the observed PHCs was 4 hours 39 minutes while the average resumption and closing time were 8:52 am and 1:30pm respectively as shown in table 4.22.

Table 4.22: Time Spent by Personnel in Observed PHCs

Facility (PHC)	Minimum time spent (minutes)	Maximum time spent	Mean time (hour)	Standard Deviation (hour)
All PHCs	32	6.00 hours	4.6437	1.1766
Lugbe	32	6.00 hours	4.3289	1.5713
DutseBaupma	60	5hours 41mins	4.8759	0.8625
Zuba	72	6.00 hours	4.1153	1.3729
Kuje	90	6.00 hours	4.7685	1.0770

4.19.3: Observed Staff Absenteeism

It was observed that 2 staffs from PHC centre in Lugbe were absent due to sickness and a staff went to collect vaccine for routine immunization.

At Zuba and Dutse Baupma PHCCs, staffs were absent due to staff screening

At Kuje, there was no specified reason for absenteeism. The absenteeism rate calculated from the observed PHCs in FCT was 10.7%. It ranged from 7.5% - 16.5%.

4.19.4: Status of PHC Personnel in Observed PHCs in FCT

In the observed PHCs, there were adequate numbers of Medical Officer in 3 centres, CHEW in all the centres, Nurse/midwife in 1centre, CHO, Pharmacy Technicians and Laboratory Technicians in 2 centres. All the observed PHCs showed inadequate JCHEWs. Table 4.23 shows staff shortages in all the observed facilities. All the categories of staff except CHEWs were inadequate. In all these facilities, there were no registered nurses and medical record officers.

Table 4.23: Status of PHC Personnel in Observed PHCs in FCT

Personnel	PHC							
	Lugbe		Dutse Baupma		Zuba		Kuje	
	Expd.	Avail	Expd.	Avail	Expd.	Avail	Expd.	Avail
Med. Officer	1	0	1	1	1	1	1	1
CHO	1	0	1	0	1	1	1	5
CHEW	3	4	3	4	3	6	3	11
JCHEW	6	2	6	5	6	2	6	3
Nurse	1	0	1	0	1	0	1	0
N/MW	4	2	4	4	4	2	4	2
MRO	1	0	1	0	1	0	1	0
PTechn	1	0	1	1	1	0	1	1
Lab.Tech	1	0	1	2	1	0	1	4

4.19.5: Services Provided to Patients in the Observed PHC Facilities:

Provision of essential drugs = 100.0%

Treatment of common Diseases/minor injuries = 100.0%

Antenatal Care = 75.0%

Family planning 25.0%

Immunization against common Childhood diseases = 100.0%

Nutrition Education = 100.0%

Health Promotion and Education = 100.0%

Mental health = Nil

Oral health = Nil

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CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Discussion

This study was carried out to assess health manpower status in PHC facilities in the Federal Capital Territory, Abuja - Nigeria. Specifically, the study determined the number, categories, qualifications, experiences of the primary health care personnel, their availability as manifested by staff population ratios, absenteeism/attendance at work, their perceptions about their availability and factors affecting their availability as well as types of primary health care facilities and services provided. This discussion section is focused on the key findings from the analysis.

5.1.1 Category and Number of PHC Personnel in the FCT

This study revealed that Primary Health Care facilities in the Federal Capital Territory were staffed by a variety of health personnel. Majority of the health facilities especially CHCs and PHCs were headed by Chief Nursing Officer (CNO), Community Health Officer (CHO) even when a Medical officer was available; some were also headed by Nurse/Midwife and Community Health Extension Workers (CHEWs). A number of staff in other categories also work in the health facilities, including Chemist, Microbiologist, Nutritionist, Laboratory Technologist, Teacher grade II, Biochemist, Mathematician, Accounting personnel, Health Educator, Statisticians, Environmental Health Assistant and Environmental Health technicians. There are other relevant medical and health personnel that were not available at all such as Public Health Nurse/Midwife, Dental Therapist, who were specially trained for direct patient care provision and health outreach whereas there were cadres that were not supposed to be in the team such as Mathematicians, grade II Teachers, Accounting personnel doing the work of a medical record officer. Addition of

these relevant health personnel and even Family Physician and removal of not so relevant personnel should be a positive step towards improving quality of care.

The total number of PHC personnel under consideration at the time of this study was 931 instead of about 1,369 excluding Midwives. There was actually health manpower gap between the number of health workers available and the number needed for health care provision in FCT. According to Markle *et al.* (2007), birth outcomes are strongly associated with the presence of a skilled birth attendant at deliveries and a minimal density of health workers is needed to ensure that all women will have access to a skilled attendant. This result is an indicator of poor access to skilled birth attendant at delivery likely to contribute to high maternal mortality in the rural and urban slum of the FCT.

5.1.2 Qualifications of PHC Workers

The large majority of the respondents had post secondary education. A little less than a quarter of them qualified within the last 10 years and a high proportion of them had Diploma or its equivalent. About one tenth of them had Higher Diploma/Degree. According to Markle *et al.* (2007), a PHC workforce that is adequate in number but lacks the educational preparation or supervision necessary to assure quality PHC practice will not impact population health outcomes. This showed that the low educational qualification of majority of the health workers in this study may affect the quality of services provided by PHCs in FCT

5.1.3 Experiences of PHC Workers

The average years of working experience among PHC workers in the FCT was eight years while the average length of years in their current facility was four years compared to Gupta *et al.* (2003) who reported an average of 14 years of experience in primary health care in Kogi and Lagos states with the average length of tenure in the current facility of about 2.7 years. CHOs and pharmacy technicians had over 16 years of working experience compared to other cadres. Medical officers, Midwives and Nurses on the other hand had the least years of working experience and also length of tenure less than two years. This implies that they had not stayed for a reasonable length of time and this could be attributed to new recruitment that was carried out in FCT shortly before this study was conducted.

It should be noted that employee longevity is important because it takes time for the worker and client to build enough trust to interact successfully. According to Humphreys *et al.*(2009) report, two years is considered a reasonable length of service for Medical officers, nurses, physiotherapists, mental health workers/psychologists, social workers, podiatrists, and Indigenous health workers.

5.1.4 Socio-Demographic Characteristics of PHC Respondents

The age range of respondents in FCT Primary Health Care facilities was 19-53 years with majority (79.4%) of staff falling between 20-39 years. This result shows that the workforce is relatively young and is still in their active stage. The mean age of the respondents (33 ± 7.4 years) was lower than the mean age (41 years) reported by Gupta *et al.* (2003) in Kogi and Lagos States. However, only a few (3.5%) were 50 years and above. Ageing is a characteristic of a shrinking work force but this is not the case in this study. This call for close supervision and in-service training required to ensure that the workforce is aware and prepared to meet FCT present and future needs as stated by Kabene *et al.* (2006), a properly trained and competent workforce is essential to any successful health care system.

There were more male Medical Officers than the female Medical Officers in the primary health facilities in FCT while other health providers were predominantly females. This finding is in agreement with the World Health Report (2006) that men continue to dominate the medical profession, while other health service providers remain predominantly female. There was however exceptions in the following cadres; Laboratory Scientist, Pharmacy Technician and medical record staff who were predominantly male.

5.1.5 Health Manpower Availability

Availability of manpower continues to be a major issue in the implementation of PHC services in Nigeria. In this study, the average number of the categories of PHC health personnel per facility in FCT, include Medical officers 0.4, Nurses/Midwives 4.5, Lab staff 1.4, CHO 1.4, CHEWs 3.9, Pharmacy staff 0.5 and MRO 1.3 in comparison to the average number of public sector health workers per facility by level of primary health care

reported by Chankova (2006) which included Medical officers 0.2, Nurses/midwives 2.6, Lab staff 0.5, Pharmaceutical staff 0.3 and CHO/CHEWs 6.1, the FCT had made a slight progress.

Distribution of respondents' designation by area council level of care showed that the largest groups of health cadres in the FCT PHC facilities were the CHO/CHEWs and Nurses/Midwives. Imbalanced staff distribution was common in all the area councils in FCT, even those with the highest density of health personnel. There was also great disparity in the distribution of PHC workers in the rural and urban areas. In the largely urban (AMAC) there was over concentration of high level manpower than largely semi urban area councils (BAC, G/LADA) and largely rural area councils (KWALI, KUJE, ABAJI) (EQUINET AND MEDACT, 2007). This suggests that health professionals prefer to practice in urban locations and rich cities. This finding was in agreement with the report of HERFON 2006.

Taking into consideration the availability of PHC personnel categories in the FCT, CHO was found to be surplus in AMAC, BAC, Gwagwalada and KUJE while Abaji and Kwali Area Councils had shortages. Medical officers were only adequate in AMAC (largely urban). Other PHC personnel categories which included; Nurses, Nurse/Midwives, Pharmacy Technicians and Laboratory Technicians were surplus in only urban and semi urban areas while the rural areas were in shortage of them. All the area councils except Kwali had surplus senior CHEWs while shortages of junior CHEWs were observed in all the area councils. It is surprising that only Kwali area council (rural) had surplus Medical recorders, AMAC and Gwagwalada had shortages and other area councils had none. The implication of this analysis is that there was uneven distribution of various categories of health personnel available in the FCT which was in agreement with HERFON (2007) report which stated that the current HRH situation in Nigeria indicates that the availability and distribution of HRH for PHC is far from being adequate, with existence of large disparities among local governments in the same states in the same geo-political zone and the different geo-political zones in the country.

In line with the World Bank (2010) report that facilities in rural LGAs on average are likely to be staffed by CHEWs, the remotest area council to the federal capital in the territory Abaji area council was largely staffed by CHEWs. The study also showed that staffing levels vary between health cadres in the FCT and within the various area councils.

In this study, there was no ideal number of PHC facilities in the FCT according to ward health system. There were personnel gaps identified based on the primary health care facilities on ground in all personnel cadres except CHO, SCHEWs and nurses. Unfortunately, there was no minimum standard of requirement recommended for Midwives/Community Midwives for primary health care facilities in the country by NPHCDA. As a result, gaps for these categories of personnel could not be ascertained. If there was an ideal minimum facility on ground in the FCT, the personnel gaps would have been worse. There were stark gaps identified in health personnel availability in the FCT and according to Kabene *et al.* (2006) the number of health workers available in a country is a key indicator of that country's capacity to provide delivery and interventions. Therefore, the findings have great implications for effective and efficient health delivery and interventions in the FCT.

5.1.6 Staff Population Ratio (SPR)

The minimum staffing level for PHC varies between health cadres. The staff/population ratio also varies between zones and locations. For Medical Officer in FCT, SPR was 1:107,527 compared to 1:164,110 in South West zone and 1:480,313 in North West zone. The CHO's in the FCT has a ratio of 1:31,250 compared to 1:59,679 in South East zone and 1: 20,494 in North Central zone (the geographical zone where FCT is located). It is established that Medical Officer/population ratio in the rural areas is between 1:40,000 to 1:200,000. Akhayere (2002) and the recommended Medical officer/population ratio is 1:10,000 and nurse/population ratio is 1:1,500 by WHO (1961) (cited in Ojeifo, 2008). The study showed a poor Medical Officer and Nurse/Midwives population ratios (1:107,527) and (1:17, 241) respectively. This is in conformity with WHO (2007) that the ratio of rural Medical Officers to population is far less than the ratio of total Medical Officers to total population.

In general the largely rural areas had the highest total staff/population ratios followed by largely semi urban areas and least in the largely urban areas. This may not actually be the true picture because the larger populations in the largely urban and semi urban areas had better access to secondary and tertiary hospitals which are well equipped and better staffed with highly qualified personnel than in the largely rural areas.

When we consider the number of Medical Officer, Nurses, Nurses Midwives And Midwives in primary health care facilities in the FCT per 1000 population, the FCT had about 0.11 compared to 2.5 suggested by JLI that, on average, countries with fewer than 2.5 health care professionals (counting only Medical Officer, Nurses And Midwives) per 1000 population failed to achieve an 80% coverage rate for deliveries by skilled birth attendants or for measles immunization (World Health Report, 2006).

5.1.7 Staff Mix

Staff mix in all the facilities was generally poor. Out of the 14 Comprehensive Health Centres observed, only eight had a Medical Officer each. Only one of the six CHC in Abaji had a Medical Officer. Six out of the eighteen primary health centres in the FCT had a Medical Officer each. According to Kabene (2006) it is also essential to maintain an appropriate mix between the different types of health promoters and caregivers to ensure the system's success. With the type of staff mix in the various facilities all over the FCT, the primary health care system has a long way to go to ensure the quality health care envisaged for the underserved populations in the rural and urban areas.

The ratio of senior to junior grade staff within the selected categories of staff in the FCT is about 1:4. Dubois and Singh (2009) reported that there is no indication of the appropriate ratio for any grade on the health care team, although several observational studies support the view that a rich mix of qualified personnel with advanced degrees or specialty certifications is associated with better clinical outcomes

If PHC is expected to be the best health care with the best use of the available resources and not second best health care meant only for the rural poor or the urban slums, there

should be a system of categorizing and providing for the personnel mix for PHC facilities as its being practiced in Jamaica (HERFON, 2007). Each ascending level of primary health care should have a mix of personnel that enables it to deal comprehensively with the health problems of the community being served.

5.1.8 Staff Absenteeism and Attendance at Work

Absenteeism is the failure of employees to report for work where they are scheduled to work. Absenteeism was reported to be rare by majority of the respondent. However, health personnel were observed to be generally late to work or leave the health facility before closing time, spending less than 6 hours per day because they had to follow up one thing or the other at the Area Councils headquarters. This was confirmed by their mean arrival (8.52am) and closing time (1.30pm). This translates to health personnel coming late to work 52mins after arrival time and closing 30mins before closing time every day. The study also revealed that lateness to work could be as a result of most workers living outside the community where they work

5.1.9 Factors encouraging Availability (retention) of Existing Staff

Factors thought to substantially encourage availability of existing staff by respondents were those related to opportunity for continuing education, availability of Materials to do the job, doing work one was trained for, working equipments and supplies, timely payment of salary, professional code of conduct, team work, giving some degree of autonomy to manage their work, clear job description, and clean water and light. Factors thought to be more effective and effective are helpful supervision, and fair salary and wages respectively. However, the levers thought to be most effective at increasing the availability of existing staff in World Health Report (2006) were those related to salaries and payment mechanisms, together with the materials to “do the job” and a degree of independence allowed to individual health workers to manage their work whether in the management and deployment of staff for managers, or in clinical decisions for health care providers. Job descriptions and codes of conduct may also help, by providing clarity and the sense of professionalism which often appears to sustain health workers in difficult conditions. Humphreys *et al.* (2009) also reported that financial incentive, professional development opportunities, supportive supervision and mentoring and continuing

professional development improved infrastructure and paid housing and/or vehicle were most effective in encouraging medical officer and other health workers to stay longer in their health service.

5.1.10 Respondents' Solution Opinion on PHC Personnel Shortage

Among the solutions proffered on personnel shortages were; employment of qualified staff, provision of equipments and supplies, fair remuneration (salary wages), training and manpower development, physical infrastructural development, provision of drugs, provision of accommodation within the health facility or community, incentives (transportation, logistics to attend work), good working environment, supportive supervision, allocation of adequate fund for PHC staff recruitment, fair and equitable distribution of staff, political will to be committed to adequate PHC staff employment on the side of government and acceptance of posting by health workers. This is in line with Ndetei *et al.*, (2008) feedback received from health workers in a study in Kenya, health workers highly valued a number of non-financial incentives such as, improved working conditions, training and supervision, good living conditions, communications, health care and educational opportunities for themselves and their families.

5.1.11 Types of Primary Health Care Facilities and Services Provided.

The majority and all categories of respondents worked in primary health care centres when compared with other health care facilities. The CHCs in Abaji, and Bwari area councils had few workers and were usually CHEWs contrary to minimum manpower recommended for CHC by NPHCDA

It should be noted that many of the health personnel did not know the names used for the health facilities where they worked especially those working in primary health clinics referred to their place of work as primary health care centre and some in health post referred to their health facility as primary health clinic. In many of the health facilities, the number of staffs was more in some health clinics than in some health centres and one could hardly differentiate between primary health clinic and primary health centre structurally.

5.1.12 Health Services Provision

Majority of the health facilities carry out the PHC health services minimum package except mental health and care of the elderly. According to Asuzu and Ogundeji, 2007, there should be recommended minimum sets of PHC services for each facility type for effective services and referral system. It is very important for the PHC personnel to be involved in services they are capable of providing.

5.1.13 Human Resources Requirements for Primary Health Care in the FCT

In summary, the basic HRH requirement ideal for the FCT all things equal would be 8,322-12,483 giving an ideal SPR of 59-89/10,000 compare with the present 957 and SPR of 6.8/10,000.

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5.2 Conclusions

This study was carried out to appraise the PHC staffing situation in the Federal Capital Territory, Abuja, Nigeria. It is a known fact that there are shortages in number of skilled primary health care manpower that will effectively and efficiently deliver PHC services in many parts of the nation today. The Federal Capital Territory (FCT) by virtue of its political status is expected to be a model regarding the effective implementation of PHC especially in the critical area of human resources for health. This study therefore focused on getting information to ascertain how successful the Area councils have been able to staff the health facilities in line with the minimum staffing standard recommended by NPHCDA for proper HRH management.

The findings were as follows:

- The PHC personnel were of various categories but the majority of health personnel in the FCT were mainly CHO/CHEWs and Nurse/Midwives
- There were shortages of health personnel in all the medical and health cadres except in CHO, senior CHEWs and Nurses when viewed from the available personnel and health facility types on ground. From the viewpoint of ward health system, there were inadequate health facilities and stark health personnel gaps in all the essential cadres needed for provision of primary health care services in FCT.
- There was inequity in health personnel distribution between and within the various Area Councils. The largely rural health facilities were staffed mainly by CHEWs.
- Absenteeism was due mainly to staff screening, ill health, follow up on files and collection of drugs.
- Majority of health personnel were either late to work or close earlier than the expected closing time.
- Health facilities were not distributed in line with ward health system. The most largely rural Abaji Area Council had 6 Comprehensive Health Centres but had no health post at all and lacked the appropriate staff to man its facilities.
- There was no human resource for health policy to guide staff recruitment, selection and deployment to ensure a fit between HRH intervention and the health goals at the primary care level in all the area councils.

5.3 Recommendations

Based on the findings of this study, the following short and long terms recommendations were made: - In the short term,

1. The federal government as a matter of urgency should increase financial allocation to the local governments to enable them employ suitable personnel, purchase better equipments and construct better facilities for the local government to remain effective primary health care operators.
2. Non-financial incentives such as training and development of career, improved working conditions and provision of accommodation close to the health facilities should be developed by the area councils' management to retain health personnel in rural and understaffed areas.
3. There should be dedicated transport for the delivery of drugs, vaccine and other supplies for PHC activities by the area council management to prevent staff lateness to and absenteeism at work. The health providers at facility level should be discouraged from following files through closer supervision by the various heads of primary health care facilities. The administrative staff should be made to do their work by the medical officer of health at the area council's department of health.
4. The population with less physical access should be given outreach services such as employing the use of mobile clinics from the primary health centres at the area councils headquarter.

In the long term,

1. There should be strong political will on the part of the three tiers of the government of Nigeria to support the primary health care system as the veritable tool in reaching everyone in the community to ensure improved health status for socio economic development of the nation.
2. There is need for adequate number of community nurses, community midwives, laboratory technicians, and public health physicians and other staff cadres like district Psychiatric Nurses and Public Health Nurses, Dental Nurses/Technicians,

Dental Therapists for oral health care in order to provide quality comprehensive health care in the FCT primary health care facilities.

3. Availability in terms of adequate human resources for health (HRH) is a key requirement for reaching health goals. It is also a known fact that quality data and accurate projection of future HRH requirements are needed to inform the health policy planning process. Therefore, there is a need for the drafted HRH Policy document to be approved by the federal government and distributed to health sector managers and practitioners to provide the strategic basis for health resources management at all levels of health care in Nigeria in such areas as staff recruitment, deployment (skill mix) development and retention of health workers in lower-income districts and at lower levels of the health system to ensure that all areas reach minimum standards with regard to numbers of personnel per population.
4. Since primary health care is the closest and cheapest means of obtaining health care especially among the vast majority of the nation's population for socio-economic prosperity of the nation, it is expedient that the federal government take charge of Primary Health Care in the country through the amendment of the constitution of the federal republic of Nigeria.

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APPENDICES

Appendix 1:- Questionnaire for PHC facility health workers

HEALTH MANPOWER AVAILABILITY IN PRIMARY HEALTH CARE FACILITIES IN FEDERAL CAPITAL TERRITORY, NIGERIA

CONSENT FORM:

Date.....

Serial no:.....

Dear Sir/Ma,

I am a Master of Public Health Student of the University of Ibadan, Department of community medicine, and Faculty of Public Health. I am conducting a research on the above topic in partial fulfillment of the requirement for an MPH degree in Health Policy and Management. This study is aimed at determining the availability of health care workers for primary health care services in the Area Council's health facilities. The objective is to obtain information on which to base recommendations on adequate numbers and quality of health workers for health care improvement.

Your objective response will be highly appreciated and will be treated with strict confidentiality. You can discontinue participation in the study at any point if you so wish.

Please do not put your name on the questionnaire. Thank you.

Consent: - I am interested in participating in the study

Signature of Respondent.....Date.....

SECTION A: SOCIO-DEMOGRAPHIC AND OCCUPATIONAL CHARACTERISTICS DATA:

Instruction Please tick (√) as appropriate

1. Age as at last birthday (In years)..... (Pls. specify)
2. Sex: 1. Male 2. Female
3. Ethnic group:
 1. Yoruba 2. Hausa 3. Igbo 4. Others (pls. specify).....
4. Religion:
 1. Christianity 2. Islam 3. Traditional 4. Others (pls specify).....
5. Marital status:
 1. Never married 2. Married 3. Separated 4. Divorced 5. Widowed
6. Community Status: 1. Indigene 2. Non-Indigene
7. What local language(s) do you speak? (Pls. specify).....
8. Highest level of education obtained:
 1. Primary school 2. Secondary school 3. Post secondary
 4. Tertiary Education 5. Others.....
9. What is your designation at work?
 1. Medical officer 2. CHO 3. Nurse/Midwife 4. Nurse 5. Midwife
 6. Senior CHEW 7. Junior CHEW 8. Others (pls. specify).....
10. State your professional qualifications with dates.....
.....
11. How many years of experience do you have in the profession stated above?.....
12. How long have you been working in this primary care facility?.....
13. How close is your residence to your work place?
 1. within the health facility premises
 2. within the community where facility is located
 3. within the Area Council
 4. outside the Area Council

14. Do you do any other work outside what you are trained to do?

1. Yes 2. No

15. If yes, what type of work?.....

SECTION B: AVAILABILITY OF HEALTH WORKERS

16. How often are members of staff absent from work in this facility?

1. Rarely 2. Often 3. Very often

17. What will make you absent yourself from work? (Tick as appropriate pls.)

Factors responsible for absenteeism	Yes	No
a. Lack of roads		
b. Lack of electricity		
c. Poor toilet facilities		
d. Lack of piped and portable water		
e. Sickness		
f. Lack of payment of salary		
g. Others (pls. specify)		

SECTION C: WORKERS PERCEPTIONS OF THEIR AVAILABILITY AND FACTORSAFFECTING AVAILABILITY.

18. Is the number of health staff working here adequate for the services you carry out?

1. Yes 2. No

19. If the answer is No, what do you think could be responsible?

.....
.....
.....

20. What effect do you think your absence from work will have on patients care?.

Effect	Yes	No
a. Death of patient		
b. Patient condition becomes worse		
c. Patient will be unhappy		
d. Decrease in patient flow		
e. No effect		
f. Others (pls. specify)		

21. How effective do you think each of the following factors will encourage you to come to work? (Pls. tick (✓) the appropriate effect).

Factors	Effective	More effective	Most effective
a. Fair Salary and wages			
b. Timely payment of salary			
c. Clear job description			
d. Availability of Materials to do the job			
e. Helpful supervision			
f. Working equipments and supplies			
g. Opportunity for continuing education			
h. Team work			
i. Clean water and light			
j. Doing work you are trained for			
k. Free hand giving to you to manage your work			
l. Professional code of conduct			

22. What in your opinion is the solution to the problem of health workers shortage in Primary Health care services delivery?

.....

.....

.....

SECTION D: TYPES OF PRIMARY HEALTH CARE FACILITIES AND SERVICES PROVIDED.

23. What type of Health facility are you working in?

1. Comprehensive Health Centre
2. Primary Health Centre
3. Dispensary/Health Clinic
4. Maternity
5. Others (pls. specify).....

24. What services does your facility provide? (Tick as appropriate pls.)

Services provided	Yes	No
a. Health promotion and education		
b. Nutrition Education		
c. Antenatal care		
d. Inpatient deliveries		
e. Postnatal care		
f. Oral rehydration therapy		
g. Family planning services		
h. Immunization against common childhood diseases		
i. Treatment of common diseases/minor injuries		

j. Provision of Essential drugs		
k. Oral health care		
l. Mental health care		
m. Adult care		
n. Care of the elderly		
o. Emergency care		

25. Do you give appointment to your patients? 1. Yes 2. No

26. If yes, give reason(s) why you give appointment.....

27. Do you go out on outreaches? 1. Yes 2. No

28. If yes, what type of outreaches? Tick the appropriate option(s)

Types of outreaches	Yes	No
a. Immunization		
b. Health promotion and education		
c. Awareness on environmental sanitation		
d. Follow up of TBAs		
e. Others (pls. specify)		

29. How often do you go on outreaches?
 1. Very often 2. Sometimes 3. Rarely

30. Do you go on home visit? 1. Yes 2. No

31. How often do you go on home visit?
 1. Very often 2. Sometimes 3. Rarely

32. What was the visit for? Tick the appropriate option(s)

Purpose of home visit	Yes	No
a. Failure of mother to bring child for immunization		
b. Follow up after discharge from the facility		
c. Others (pls. specify)		

33. Which health facilities does this facility refer patients to?

34. Which health facility/facilities refer patients to this facility?

Appendix 2: In-depth Interview for the Heads of the six area councils and the heads of Selected PHC facilities

Health Manpower Availability in Primary Health Care Facilities in Federal Capital Territory, Nigeria

In-depth Interview Guide: Heads of Area Councils’ department of Health and selected primary health centres.

Dear Sir/Ma,

I am a Master of Public Health Student of the University of Ibadan, Department of Community Medicine, Faculty of Public Health. I am conducting a research on the above topic in partial fulfillment of the requirement for an MPH degree in Health Policy and Management. This study is aimed at determining the availability of health care workers for primary health care services in the Area Council’s health facilities. The objective is to obtain information on which to base recommendations for health care improvement. Your objective response will be highly appreciated and will be treated with strict confidentiality. Thank you.

IDENTIFICATION	
Name of Ward/town:	Ward/Town code
Name of Area Council:	Area Council code
Name of field investigator:	Urban/rural: 1.Capital city 2.Other urban 3.Rural
Result of final interview: Completed Partially completed Refused Reason: _____	Date of interview: Day Month Year
Occupation of the main respondent to the questionnaire:	Tick the appropriate occupation
Medical officer	
Pharmacist	
CHO	
Other	

Question	Response code
General information	
1. I would like to ask you some questions on the services and patient care provided in this Area council. How many days per week are the facilities open to outpatients?	Days. Do not know.....
2. How many outpatients have been seen in your health facility in the last 30 days?	Number. Do not know.....
3. How many inpatients have been hospitalized here in the last 30 days?	Number. Do not know

4. Do you provide the following services in your PHC facilities/facility? If not, why not?

Services	Yes	No	Main reason why not
a. Health promotion and education			
b. Nutrition Education			
c. Maternal and child health care			
d. Family planning			
e. Immunization against common childhood diseases			
f. Treatment of common disease/minor injuries			
g. Provision of essential drugs			
h. Care of the elderly			
i. Emergency care			
j. Other (specify).....			

5. Do these services meet the needs of your patients? 1. Yes 2. No

6. If No, explain why.....
.....

Personnel

I would now like to ask you some questions about the positions and personnel working in this Area Council’s PHC facilities.

7. Are you short of staff? 1. Yes 2. No

8. OCCUPATION	What is the number of positions filled in this Area council/this facility:		What is the number of positions that are vacant	
	As of today	At the end of year 2008	As of today	At the end of year 2008
a. Medical officer				
b. CHO				
c. Midwife				
d. Nurse				
e. Nurse/Mid-wife				
f. CHEW				
g. JCHEW				
h. Pharmacist				
i. Pharm. Tech.				
j. EHO				
k. EHTechnician				
l. Lab. Scientist				
m. Lab. Technician				
n. Nutritionist				

9. Why have the vacant positions not been filled?.....

10. OCCUPATION	What is the number of personnel who stopped working in this Area council/this facility:	
	Between 1 January and 31 December 2007	Between 1 January and 31 December 2008
a. Medical officer		
b. CHO		
c. Midwife		
d. Nurse		
e. Nurse/Mid-wife		
f. CHEW		
g. JCHEW		
h. Pharmacist		
i. Pharm. Tech.		
j. EHO		
k. EHTechnician		
l. Lab. Scientist		
m. Lab. Technician		
n. Nutritionist		

11. Why did they stop work?.....

12 . Is staff absenteeism a problem in this Area council? 1. Yes 2. No

13. If yes, give three most common causes of absenteeism of staff in this Area council/facility.....

14. What specifically do you do to minimize absenteeism?.....

15. Are there any of your health facilities dormant? 1. Yes 2. No

16. If yes, why?.....

17. Is there any human resource policy in use in this Area Council? 1. Yes 2. No

18. If no, how do you get staff to work in your health facilities?.....

Appendix 3: Observation Checklist for Patients, Staff Attendance at Work and PHC Services Provided by Selected Primary Health Centres.

Health Manpower Availability in Primary Health Care Facilities in Federal Capital Territory, Nigeria:

Observation checklist for staff availability

Facility code:

Serial No:

Date:

Staff attendance at work (in selected PHCs)

Day 1, 2, 3, 4, 5, 6, 7. (Circle the appropriate day)

Staff	Male	Female	Arrival Time	Closing Time
A				
B				
C				
D				
E				
F				
G				
H				
I				
J				
K				
L				
M				
N				
O				

Observation checklist for Types of services provided.

Facility code:

Serial No:

Date:

Services rendered	Type of Health Facility
	PHCCentre
1. Health promotion and education	
2. Nutrition education	
3. Maternal and child health	
4. Family planning	
5. Immunization against common childhood diseases	
6. Treatment of common disease/minor injuries	
7. Provision of essential drugs	
8. Mental health	
9. Oral health	
10. Other	

Appendix 4

LETTER OF INTRODUCTION AND CO-OPERATION TO THE CHAIRMEN OF AREA COUNCILS

Faculty of Public Health,
Department of Community Medicine,
University of Ibadan – Nigeria.
18/06/2009.

The Chairman,
Abuja Municipal Area Council,
Garki – Abuja.

Attn: The Medical Officer of Health/PHC Coordinator

Request for cooperation to carry out a research project in the Area Council

Dear Sir/Ma,

I, Dr. Christianah M. Ibrahim a Master of Public Health Student of the University of Ibadan, Department of community medicine, and Faculty of Public Health. I am conducting a research on the above topic in partial fulfillment of the requirement for an MPH degree in Health Policy and Management. This study is aimed at determining the availability of health care workers for primary health care services in the Area Council's health facilities. The objective is to obtain information on which to base recommendations on adequate numbers and quality of health workers for health care improvement in FCT.

The FCT Health Research Ethics Committee has given me approval to carry out the research.

I wish to request your cooperation to access all the Primary Health Care Facilities and all the health workers in these facilities to achieve the objectives of the study.

Thank you.

Yours' Faithfully,

Dr. C. M. Ibrahim.

Appendix 5:- Ethical Approval



FEDERAL CAPITAL TERRITORY
HEALTH RESEARCH ETHICS COMMITTEE

Office of the Secretary of the Committee

(Research Unit, Room 10, Annex Building,) HHSS Secretariat Area 11, Garki - Abuja, Nigeria

June 17, 2009

Re: Health Manpower Availability in Primary Health Care Facilities in Federal Capital Territory, Nigeria: Implications for Primary Health Care Services.

Name of Principal Investigator: Dr. Christianah Moronwitan Ibrahim

Address of Principal Investigator: Department of Community Medicine, University of Ibadan

Date of receipt of valid application: 11/05/2009

NOTICE OF FULL APPROVAL AFTER FULL COMMITTEE REVIEW


Protocol Approval Number: FHREC/2009/01/6/17-06-09

This is to inform you that the research described in the submitted protocol, the consent forms, advertisements and other participant information materials have been reviewed and given full approval by the Federal Capital Territory Health Research Ethics Committee.

This approval dates from 17/06/2009 to 16/06/2010. If there is delay in starting the research, please inform FHREC so that the dates of approval can be adjusted accordingly. Note that no participant accrual or activity related to this research may be conducted outside of these dates.

All informed consent forms used in this study must carry FHREC assigned protocol approval number and duration of FHREC approval of the study. In multiyear research, endeavour to submit your annual report to the FHREC early in order to obtain renewal of your approval and avoid disruption of your research. At the end of the research, a copy of the final report of the research should be forwarded to FHREC.

The National Code for Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations and with the tenets of the code including ensuring that all adverse events are reported promptly to the FHREC. No changes are permitted in the research without prior approval by FHREC except in circumstances outlined in the code. The FHREC reserves the right to conduct compliance visit to your research site without previous notification.


Ikwubiela S. Adem
Secretary, FHREC
For: Chairman FHREC



Abuja
The Heart of Nigeria

Appendix 6: The status of PHC Staff in FCT Area Councils. The tables also show percentage availability and staff population ratios in each area council.

ABAJI AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw	
	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Exp	Avail	Avail	
Alu-Mamagi	-	-	-	-	-	-	4	12	8	0	-	-	-	-	-	-	-	-	-	-
Abaji Central	1	1	1	0	1	2	3	11	6	7	4	2	1	0	1	0	1	0	0	-
EbagiRimba	1	0	1	1	1	0	5	10	10	3	4	0	1	0	1	0	1	0	0	-
Gawu	1	0	1	0	1	0	7	10	14	2	4	0	1	0	1	0	1	0	0	-
Gurdi	1	0	1	0	1	0	3	6	6	0	4	0	1	0	1	0	1	0	0	-
North East	1	0	1	0	1	0	3	3	6	0	4	0	1	0	1	0	1	0	0	-
Nuku	1	0	1	0	1	0	9	13	18	3	4	0	1	0	1	0	1	0	0	-
Pandagi/Angyana	1	0	1	0	1	0	7	12	14	2	4	0	1	0	1	0	1	0	0	-
Yaba	1	0	1	0	1	0	7	12	14	2	4	0	1	0	1	0	1	0	0	1
Total	8	1	8	1	8	2	48	89	96	19	32	2	8	0	8	0	8	0	0	1
% Available	12.5%		12.5%		25%		185.4%		19.8%		6.25%		0%		0%		0%			
Staff/popn. ratio	.17/10,000		.17/10,000		.34/10,000		15.2/10,000		3.25/10,000		.34/10,000		0		0		0			

ABUJA MUNICIPAL AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.
Garki	-	-	-	1	-	1	6	5	12	6	-	4	-	-	-	-	-	-	-
Gwagwa	1	1	1	1	1	1	5	5	10	2	4	2	1	0	1	1	1	0	-
Gwarinpa	-	-	-	2	-	1	2	16	5	8	-	-	-	-	-	-	-	1	1
Gui	-	-	-	1	-	2	6	8	12	0	-	-	-	-	-	-	-	-	1
Jiwa	-	-	-	1	-	3	6	7	12	4	-	1	-	-	-	-	-	-	-
Kabusa	-	-	-	2	-	1	12	15	18	8	-	1	-	-	-	-	-	1	-
Karshi	-	-	-	1	-	-	2	3	5	1	-	-	-	-	-	-	-	-	-
Karu	1	1	1	1	1	2	5	9	10	2	4	6	1	0	1	1	1	2	-
Orozo	1	1	1	0	1	0	7	9	14	8	4	4	1	1	1	1	1	1	-
Total	3	3	3	10	3	11	51	77	98	39	12	18	3	1	3	3	3	5	2
% Available	100%		333.3%		366.7%		151%		39.8%		150%		33.3%		100%		166.7%		
Staff/popn ratio	.039/10,000		.13/10,000		.14/10,000		.99/10,000		.501/10,000		.23/10,000		.013/10,000		.039/10,000		.051/10,000		

BWARI AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.
Dutse	2	2	2	4	2	3	10	12	20	8	8	12	2	0	2	3	2	8	1
Shere	-	-	-	1	-	-	2	7	7	0	-	-	-	-	-	-	-	-	1
Igu	-	-	-	-	-	-	-	4	4	4	4	1	0	0	0	0	0	0	0
Kawu	1	0	1	1	1	0	5	4	12	6	4	-	1	0	1	0	1	0	-
Byazhin	-	-	-	-	-	-	2	7	6	4	-	-	-	-	-	-	-	-	-
Kubwa	1	1	1	1	1	3	7	9	14	7	4	5	1	0	1	1	1	1	2
Bwari	-	-	-	-	-	1	4	5	11	8	-	2	-	-	-	-	-	-	1
Ushafa	-	-	-	1	-	2	2	6	6	7	-	1	-	-	-	-	-	-	-
Total	4	3	4	8	4	9	32	54	80	44	16	21	4	0	4	4	4	9	5
% Available	75%		200%		225%		168.8%		55%		137.5%		0%		100%		225%		
Staff/popn ratio	.089/10,000		.352/10,000		.396/10,000		2.4/10,000		1.9/10,000		.97/10,000				.18/10,000		.4/10,000		

GWAGWALADA AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.
Kutunku	1	1	1	2	1	2	5	14	10	3	4	6	1	1	1	0	1	0	1
TungaMaje	1	0	1	2	1	1	5	5	10	7	4	1	1	0	1	0	1	0	1
Paikon-Kore	-	0	-	0	-	0	4	6	8	3	-	-	-	0	-	0	-	-	1
Central	1	1	1	3	1	1	5	8	10	3	4	6	1	0	1	1	1	1	1
Zuba	1	1	1	1	1	1	3	4	6	2	4	2	1	0	1	0	1	0	-
Gwarko	-	-	-	1	-	-	6	4	12	3	-	-	-	-	-	-	-	-	-
IBWA	1	0	1	0	1	0	11	8	22	5	4	1	1	0	1	0	1	0	1
Dobi	1	0	1	0	1	0	15	9	30	3	4	0	1	0	1	0	1	0	1
IKWA	-	-	-	-	-	-	4	2	8	1	-	-	-	-	-	-	-	-	-
Total	6	3	6	9	6	5	58	60	116	30	24	16	6	1	6	1	6	1	6
% Available	50%		150%		83.3%		103.5%		25.9%		66.7%		16.7%		16.7%		16.7%		
Staff/popn ratio	.19/10,000		.57/10,000		.32/10,000		3.8/10,000		1.9/10,000		1.01/10,000		.063/10,000		.063/10,000		.063/10,000		

KUJE AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.
Kuje	1	1	1	10	1	2	5	64	10	43	4	11	1	0	1	1	1	7	1
Chibiri	-	0	-	2	-	-	8	11	16	6	-	1	-	-	-	-	-	-	1
Gaube	2	1	2	1	2	0	24	13	48	17	8	5	2	0	1	0	1	1	-
Kwaku	1	0	1	0	1	1	9	5	18	0	4	1	1	0	1	0	1	0	-
Kabi	-	-	-	-	-	1	14	6	28	3	-	-	-	-	-	-	-	-	-
Rubochi	1	0	1	0	1	0	9	1	18	0	4	0	1	0	1	2	1	0	4
Gwargwada	1	0	1	0	1	0	5	4	10	0	4	0	1	0	1	0	1	0	-
Yenche	-	-	-	1	-	-	2	1	4	2	-	-	-	-	-	-	-	-	-
Kujekwa	1	0	1	0	1	0	7	4	14	1	4	0	1	0	1	0	1	0	-
Total	7	2	7	14	7	4	83	109	166	72	28	18	7	0	6	3	6	8	6
% Available	28.6%		200%		57.1%		131.3%		43.4%		64.3%		0%		50.0%		233.3%		
Staff/popn ratio	.21/10,000		1.44/10,000		.41/10,000		11.2/10,000		7.4/10,000		1.85/10,000				.21/10,000		1.44/10,000		

KWALI AREA COUNCIL

Wards	Medical officer		CHO		Nurses		CHEWs		JCHEWs		N/Mw		MRO		PTechn.		Lab. Techn		Mw
	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Exp.	Avail.	Avail.
Ashara	1	0	1	0	1	1	5	4	11	4	4	0	1	1	1	0	1	0	-
Dafa	-	-	-	-	-	-	2	2	4	1	-	-	-	1	-	-	-	-	1
Gumbo	-	-	-	-	-	-	6	4	12	4	-	-	-	1	-	-	-	-	1
Kilankwa	-	-	-	-	-	-	10	8	20	7	-	-	-	1	-	-	-	-	1
Kwali	1	1	1	1	1	1	3	8	6	4	4	2	1	2	1	1	1	2	1
Kundu	-	-	-	-	-	-	6	5	12	2	-	-	-	-	-	-	-	-	-
Pai	1	1	1	1	1	0	9	7	18	7	4	2	1	2	1	1	1	1	2
Wako	-	-	-	-	-	1	14	12	28	5	-	-	-	1	-	-	-	-	-
Yangoji	-	-	-	-	-	-	6	4	12	5	-	-	-	1	-	-	-	-	-
Yebu	1	0	1	1	1	1	13	10	26	7	4	2	1	0	1	0	1	2	-
Total	4	2	4	3	4	4	74	64	149	46	16	6	4	10	4	2	4	5	6
% Available	50%		75%		100%		86.5%		31.5%		37.5		250%		50		125%		
Staff/popn ratio	.23/10,000		.35/10,000		.47/10,000		7.5/10,000		5.5/10,000		.7/10,000		1.17/10,000		.23/10,000		.58/10,000		

Appendix 7:
Proposed minimum health manpower requirement for PHC (Operational Guidelines for PHC; NPHCDA 2004).

Staff categories	1 CHC	1 PHC	1 Health clinic	1 Health post
Med. Officer	1	1	-	-
CHO	1	1	-	-
N/Mw	4	4	-	-
PHN	1	1	-	-
CHEW	3	3	2	-
JCHEW	6	6	4	1
MRO	1	1	-	-
Pharm. Techn.	1	1	-	-
Lab. Techn.	1	1	-	-

AMAC has 12 Wards, out of which 3 had no PHC facility.

Bwari has 10 wards, out of which 2 had no PHC facility.

Gwagwalada has 10 wards, out of which 1 had no PHC facility.

Proposed ideal number of health facility types in FCT according to ward health System

Facility	AREA COUNCILS						Total
	ABAJI	AMAC	BAC	G/LADA	KUJE	KWALI	
CHC	1	1	1	1	1	1	6
PHCentre	10	12	10	10	10	10	62
PHClinic	29	389	114	79	49	43	703
HP	117	1557	454	316	195	172	2,811
Total	157	1959	579	416	255	226	3,582

Proposed minimum no. and categories of PHC personnel in FCT according to ward health System

Area council	Medical officer	CHO	PHN	CHEWs	JCHEWs	N/Mw	MRO	Pharm. Techn.	Lab. Techn.
ABAJI	11	11	11	91	299	44	11	11	11
AMAC	13	13	13	817	3192	52	13	13	13
BAC	11	11	11	261	976	44	11	11	11
G/LADA	11	11	11	191	698	44	11	11	11
KUJE	11	11	11	131	457	44	11	11	11
KWALI	11	11	11	119	410	44	11	11	11
Total	68	68	68	1610	6032	272	68	68	68

STAFF POPULATION RATIO/10,000 OF PHC PERSONNEL GROUPS BY AREA COUNCIL

Area council	Medical Officer	Nurses/Midwives	CHEWs	CHO	Pharm. staff	Lab. Staff
ABAJI	0.17	0.86	18.5	12.5	0	0
AMAC	0.04	0.41	1.49	0.13	0.5	0.14
BAC	0.13	1.54	4.31	0.35	0.22	0.57
G/LADA	0.19	1.71	5.71	0.57	0.13	0.32
KUJE	0.2	2.9	18.59	1.44	0.31	0.82
KWALI	0.23	1.9	12.82	0.35	0.23	1.05

Filed positions as at today

Filed position	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	4	4	3	3	2	2
CHO	12	9	6	6	14	1
Midwife	5	5	4	11	1	0
Nurse	11	4	3	7	2	1
N/MW	24	20	12	6	12	2
CHEW	70	30	60	67	68	89
JCHEW	46	26	30	47	42	9
Pharmacist	1	2	1	0	0	0
Pharm. Techn	3	3	1	2	1	1
EHO	0	3	1	5	2	1
EHT	0	4	1	2	8	0
LAB. Scientist	6	1	2	2	0	0
Lab. Techn.	4	4	2	5	7	3
Nutritionist	1	0	0	0	1	0

Filled positions as at end of 2008

Filled position	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	1	1	3	1	2	2
CHO	10	9	6	5	14	1
Midwife	1	0	4	0	1	0
Nurse	2	1	3	2	2	1
N/MW	7	7	12	6	12	2
CHEW	33	12	60	31	68	29
JCHEW	3	10	30	6	42	9
Pharmacist	0	1	1	0	0	0
Pharm. Techn	2	0	1	1	1	1
EHO	0	2	1	2	2	1
EHT	0	1	1	2	8	0
LAB. Scientist	2	0	2	1	0	0
Lab. Techn.	0	0	2	0	7	3
Nutritionist	1	0	0	0	1	0

Vacant positions as at today

Vacant position	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	2	0	0	0	0	5
CHO	15	0	0	0	0	5
Midwife	32	0	0	0	0	12
Nurse	5	0	0	0	0	9
N/MW	2	0	0	0	0	12
CHEW	27	0	0	0	0	30
JCHEW	43	0	0	0	0	90
Pharmacist	5	0	0	0	0	2
Pharm. Techn	5	0	0	0	0	3
EHO	0	0	0	0	0	6
EHT	0	0	0	0	0	4
LAB. Scientist	0	0	0	0	0	2
Lab. Techn.	2	0	0	0	0	4
Nutritionist	0	2	1	0	0	2

Vacant positions as at the end of 2008

Vacant position	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	5	3	0	2	0	5
CHO	15	0	0	1	0	5
Midwife	32	0	0	0	0	12
Nurse	6	0	0	5	0	9
N/MW	6	0	0	0	0	12
CHEW	27	22	0	36	0	30
JCHEW	43	16	0	41	0	90
Pharmacist	6	1	0	0	0	2
Pharm. Techn	6	3	0	1	0	3
EHO	0	1	0	3	0	6
EHT	0	3	0	0	0	4
LAB. Scientist	5	1	0	1	0	2
Lab. Techn.	5	4	0	5	0	4
Nutritionist	0	2	1	1	0	2

Number of health workers who stopped work between Jan. 1st and 31st Dec. 2007

	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	0	0	0	0	0	0
CHO	2	2	0	0	2	0
Midwife	0	1	0	0	0	0
Nurse	0	0	0	0	0	0
N/MW	0	0	0	0	0	3
CHEW	0	0	0	1	4	16
JCHEW	0	0	0	1	2	2
Pharmacist	0	0	0	0	0	0
Pharm. Techn	0	0	0	0	0	0
EHO	0	0	0	0	0	0
EHT	0	0	0	0	0	0
LAB. Scientist	0	0	0	0	0	1
Lab. Techn.	0	0	0	0	0	0
Nutritionist	0	0	1	0	0	0

Staff turnover was very low. Majority of Staff that stopped work in Abaji Area Council were merely transferred to other Area Councils.

Number of Health Workers Who Stopped Work between Jan. 1st and 31st Dec. 2008

	Area Councils					
	AMAC	BAC	G/LADA	KWALI	KUJE	ABAJI
Medical Officer	0	0	0	0	0	0
CHO	0	0	0	0	0	0
Midwife	0	0	0	0	0	0
Nurse	0	0	0	0	0	0
N/MW	0	0	0	0	0	3
CHEW	0	0	0	1	0	16
JCHEW	0	0	0	0	0	2
Pharmacist	0	0	0	0	0	0
Pharm. Techn	0	0	0	0	0	0
EHO	0	0	0	0	0	0
EHT	0	0	0	0	0	0
LAB. Scientist	0	0	0	0	0	1
Lab. Techn.	0	0	0	0	0	0
Nutritionist	0	0	0	0	0	0

Health Facility Type by Area Council

	Area Councils				Total		
	ABAJI	AMAC	BAC	G/LADA	KUJE	KWALI	FCT
Health Post	0 (0)	3 (11.1)	16 (53.3)	0 (0)	0 (0)	1 (2.8)	20 (11.1)
Clinic	12 (60.0)	21 (77.8)	10 (33.3)	21 (77.8)	33 (82.5)	31 (86.1)	128 (71.1)
PHC	2 (10.0)	2 (7.4)	2 (6.7)	4 (14.8)	5 (12.5)	3 (8.3)	18 (10.0)
CHC	6 (30.0)	1 (3.7)	2 (6.7)	2 (7.4)	2 (5.0)	1 (2.8)	14 (7.8)
Total	20	27	30	27	40	36	180

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